

Staff 'redundant' pending inquiry

The academic staff at Fircroft College, Birmingham, have been made temporarily "redundant" on full pay while a Department of Education and Science inquiry is staged into the college's future.

Full time courses at the adult education college, the scene of serious student unrest this summer, have been postponed until the results of the inquiry, due to begin later this year, are known.

Meanwhile Mr Tony Corfield, the college principal, and the four tutors have found themselves working at a college with no students. Plans to run short courses at Fircroft for the time being have not yet materialised and, if they do, could jeopardise the tutors' jobs.

Concern over the delay in resolving the Fircroft dispute, which began when students refused to recognize the principal and introduced their own academic programme, has been expressed by the Council for Academic Freedom and Democracy and the Trades Union Congress.

Students oppose Gowon

by Sue Reid

General Yakubu Gowon, the deposed President of Nigeria, this week became an undergraduate at Warwick University amid rumblings from some student quarters over his arrival.

The general, who is reading politics and international studies, came to Britain after the bloodless coup two months ago. But his nine years in power were renowned for the war with the Biafra, who attempted to set up the state of Biafra, and this aspect of his leadership led to widespread controversy.

This week Mr Jamie Quinn, president of Warwick University's students' union, said that some individual students at the university had already called for the general's removal.

He was expecting a motion condemning the university for extending an invitation to General Gowon to be put to the first students' union general meeting of the term this week.

Rethink on FE college sought

by Sue Reid

Bedfordshire County Council is to ask the Government to reconsider its proposal to allocate 600 teacher training places to the new Bedford College of Higher Education and allow them to be split between Bedford and Luton.

The decision follows a meeting of the county council last week when Labour and Liberal councillors voted against the advice of the council's education chairman to send a letter to the Department of Education and Science before the education committee has considered the proposal.

The councillors were responding to fears that the new Luton College of Higher Education would be threatened if it could not retain some teacher training places when Putneybury College is merged with Luton College of Technology.

The Sandhurst-trained general will be one of 370 mature undergraduate students at Warwick. He said this week that ultimately he hopes to return to Nigeria and play the role of a "young elder statesman".

General Gowon will "pay his own way" with the help of a government pension from Nigeria.

New look quarterly changes its name

by Sue Reid

A leading magazine for academics, *Universities Quarterly*, is to change its name and content. *New Universities Quarterly*, subtitled "culture, education and society" will continue to be edited by Professor Boris Ford of Bristol University, and published by the Turnstile Press.

In an editorial in the autumn edition Professor Ford said that the revamped magazine would attempt to restore the "dialectical relationship" between academic expertise and learning on the one hand, and human concern on the other.

A new residential study centre has been set up by the Cambridge University Board of Extra-Mural Studies. The centre, at Madingley Hall, Cambridge, will provide courses for adults and accommodate researchers.

Poly director ordered staff to admit rejected student

by David Walker

A polytechnic director has instructed a head of department to accept a student who had previously been rejected so that "favourable relationships" with the polytechnic's local authorities were not jeopardized.

The order was given by Dr George Brown, director of North East London Polytechnic, to Mr Eric Baker, head of the social work, health and nursing department.

The student is an employee of the London Borough of Newham, one of the three local authorities which finance the polytechnic.

Staff in the department have complained to the Central Council for Education and Training in Social Work, the national valley body for the course. They say that admissions to the two-year social work training course are being interfered with "on political grounds".

The course, which was filled as long ago as June, attracted four applicants for every place but in a letter dated October 22 Dr Brown told Mr Baker that room had to be found for a nominee of Newham education department.

Dr Brown had warned members of the social work department earlier that failure to accommodate the local authority would endanger the polytechnic's income. Staff claim that a sum of £500,000 was said to be at stake.

In the letter (reproduced here) Dr Brown wrote: "I have decided that the candidate shall have priority over other people on the waiting list in order to ensure that there be no disruption of the present favourable relationships between the polytechnic and the constituent authorities."

Dr Brown's letter followed a series of meetings during September and October in which on one side it was made plain that the polytechnic owed Newham a favour and on the other that to admit an extra student irregularly to the course would entirely reduce its professional worth.

Mr James Pelling, deputy director of education in Newham, said the education department, which had only in the past few months not financial approval to send its younger members on courses, approached the polytechnic about accepting at first two and then one of the employees.

He added that since other certificates of qualification in social work courses in the London area were full he hoped Newham's "special relationship" with the polytechnic could help. Mr Pelling said Dr Brown greeted the request warmly and promised the education department a place on a training course.

Mr Pelling went on: "I understand the fear of people in the polytechnic but this is not a harbinger of 'direction' by the local authority. It was a one-off matter where we tried to help our younger employees. There was never any threat of money being cut off."

"We felt it was not unreasonable for an extra person to be added to a course with 40 members. Basically it was an attempt to work the 'old rule' act and one or two people in the polytechnic did not want to be old pals."

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From the Office of the Director
Our ref: 682/220/2
NORTH EAST LONDON POLYTECHNIC
22 October 1975

Dear Mr Baker,
ONLY COURSE - IN YEAR

Following our conversation, I now formally instruct you to accept the person on the waiting list for the social work course. You are authorized to ensure the numbers on this course from 40 to 41. I have decided that Mr Yuse shall have priority over other people on the waiting list in order to ensure that there be no disruption of the present favourable relationship between the polytechnic and the constituent authorities. He Yuse will report to you on Friday morning and put have secured so that he will be properly received and introduced to the course. Please acknowledge receipt of this letter.

Yours sincerely,
George Brown

Letter that caused the uproar.

College funds 'mishandled' inquiry told

from Sue Reid

An investigation into the financing of Fircroft College, Birmingham, which closed earlier this year after student unrest, was urged at a public inquiry this week.

The inquiry, instituted by the Department of Education and Science, is examining the background to the conflict said to have arisen over personality clashes and ideological differences between students, the principal and the governors, and possibilities for the college's future.

A tutor at Fircroft, Mr Trevor Blackwell, told the inquiry that there appeared to be prima facie evidence of "misappropriation" of public funds in the college's financing.

In written evidence he and other tutors alleged that the accounts were arranged to present a "less rosy" picture to the DES. The department, they claimed, had possibly not exercised enough financial supervision over the college, about 80 per cent of whose income comes from the DES. Further funds are provided by local education authorities and the Fircroft Trust, which controls the college finances.

Mr Blackwell showed the inquiry two letters which he claimed backed up the tutors' suspicions. The first, from Mr Alfred Gregg, secretary of the Fircroft Trust, referred to a proposal from Mr Christopher Cadbury, chairman of the college governors, to change a gift from another trust to the Fircroft Trust into a loan.

The letter said: "It seems to me whatever we do is a purely domestic matter and affects the department only so far as we might wish to paint a less rosy picture than the account shows at the present time."

It suggested that if the gift were not changed to a loan the DES might say: "If you have no debt to pay off on the development, then you can do with £1,500 a year less grant."

The second letter, from Mr Cadbury to a firm of chartered accountants, said that "for various reasons it is desirable to show a loan of £5,000 as still outstanding from the Chadwick Trust to the Fircroft Trust."

Mr Blackwell said the letters, sent during September, 1970, came to light during the student occupation of the college in July.

At the inquiry Mr Cadbury claimed that the four tutors had set out to destroy the principal, Mr Tony Corfield.

"Criticism of the governors and trustees was quite permissible but it should be done through the proper channels. In this case offensive remarks by students were allowed to pass without rebuke," said Mr Cadbury. He expressed concern that none of the tutors giving evidence at the inquiry had supported the principal.

He was not questioned at the inquiry about the alleged "misappropriation" of funds.

A dispute over the £15 "captivity" fee awarded to each student by his local education authority was also highlighted.

Mr Bill Lawrence, president of the college, continued on page 36

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AUT to accept £6?

It was predicted this week that university teachers will accept a £6 a week cost-of-living increase. The matter is to be discussed by an emergency meeting of the AUT's council tomorrow. Full story, page 36

ATTI denies 'Marxist plot' claim

by Frances Gibb

Allegations of a Marxist plot at South Bank Polytechnic were strongly denied this week by members of the Association of Teachers in Technical Institutions.

The rival union, the Association of Polytechnic Teachers, claimed last week that a £40,000 inquiry into the running of the business studies department would reveal a situation "similar to that at the Polytechnic of North London".

The polytechnic council is now to consider publication of the report at its next meeting on November 5. Until now, it has only been available to those directly involved in the inquiry.

Mr John Boyle, chairman of the ATTU, said: "The people giving evidence at the tribunal against Mrs Ellen Geach, then acting head of the business studies department, represented a cross section of political views. One was a self-confessed Powellite. People

consider the whole thing has now gone beyond the bounds of reason."

But publication of the full report would be detrimental to the polytechnic, he said. "At the beginning of the year the director said he hoped everyone would bury the hatchet and from our actions we have shown we have taken that point, although we don't think the tribunal was the correct way to go about sorting out things and we don't accept its findings. In my view, it's extremely detrimental to the polytechnic, making this up."

The full report of the inquiry held earlier this year into claims by about 30 lecturers against Mrs Geach and Mr A. J. Ballamy, deputy director, dismisses almost all of the allegations and is extremely critical of the part played by the ATTU.

It praises Mrs Geach's dynamism and dedication to her work and concludes: "There was little indication that the branch of the union had any corporate desire to service the polytechnic and,

although it was not representative of all members of staff, it was guided to the view that the acceptance of its demands, and nothing less, should be the price of normal working in the department. This to our mind constitutes a grave disservice to the polytechnic and to the members of the branch."

More careful consideration should be given to relief from teaching to attend to outside interests, it recommended. Staff should be encouraged to regard their presence in the college and availability to students as first priority.

Mr Boyle said: "One of our many feelings of resentment is due to this implication that we're idle. Staff in the polytechnic do spend quite a lot of time in outside jobs, but more in other departments - for instance, where they have more contact with industry - than in ours."

The commitment to the polytechnic of the great majority of the complainants was (said) he said. One

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General Vacancies

TUTOR - £5105 to £6855 Residential Training Establishment

The Electricity Council is the central co-ordinating body for the electricity supply industry which employs some 170,000 staff in a wide variety of technical, commercial, administrative and other work.

Applications are invited for this post, which is at senior level. The Council's Residential Centre for training is at East Horsley, Surrey, about 25 miles from London.

It is part of the Education and Training Branch and provides a range of courses to meet the requirements of Electricity Boards, including management, executive development and specialist courses.

Further development of the residential central training provision is envisaged, and an additional post is to be filled to contribute to this work. Initially, the person appointed will work from Millbank, the Council's Headquarters, and be concerned with the review and further development of certain existing courses and the development of new courses for middle and senior management. When initial

development work is nearing completion, the location of the post will be transferred to the Centre itself in order that the occupant can make an increasing contribution to the tutorial work required by the courses which have been developed, while continuing to play a part in course design.

Candidates should have degree or equivalent professional qualifications, have had some experience at executive level in industry or commerce, and experience in the design of management and executive development training in industry or the educational sector, and in tutorial work at this level.

Write in confidence, giving age, career to date and present salary/qualifying THES/113 by 24th October to: Duncan Ross, Recruitment & Development Officer, Electricity Council, 30 Millbank, London SW1P 4RD.

ELECTRICITY COUNCIL

DIRECTOR OF STUDIES IN MANAGEMENT

(Personnel Organisation and Manpower) £8,650-£11,000

The Civil Service College provides a wide range of management and developmental training for civil servants. It is expected that when the teaching centres in Sunningdale, London and Edinburgh are fully developed, up to 1,000 students will be in training at any one time.

The Director of Studies in Management will be based at Headquarters in Sunningdale, but will spend some time at the other centres. The person appointed will be responsible, directly or through subordinates, for a range of subjects designed to develop in civil servants a rounded approach to the management of people in their work. The curriculum includes the theory and practice of selection, appraisal, promotion, transfer, training, manpower planning, allocation and control, industrial relations (including Whitleyism), and other subjects of direct relevance to the management of people in the civil service. The Director will be responsible for the academic standards and performance of the teaching staff.

Candidates should normally have a degree in the field of management, social or behavioural sciences, and must have the ability to relate theoretical concepts to the practical needs of the Civil Service. Proven skills in teaching and the ability to foster them in others are essential. Experience at a senior level in the field of staff management is highly desirable.

The appointment is pensionable and will be for an initial period of 5 years with the possibility of extension. Salary will be in the scale shown above.

For further details and an application form (to be sent by 31 October 1975) write to the Civil Service Commission, Alenford Lane, Basingstoke, Hants RG21 1JB, or telephone Basingstoke (0256) 69551 (answering service operates outside office hours) or London 01-439 1992 (24 hour answering service). Please quote ref: E/9151/2.

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Please apply with brief details of appropriate experience, quoting Ref. No. 587/THES or telephone Preston 634317.

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BRITISH AIRCRAFT CORPORATION

Protect travellers from rare tropical diseases, Professor Maegraith says

by Alan Cane

Stricter legislation will have to be introduced to protect innocent travellers against exposure to little-known infections carried by sick felines on their way to hospital, Professor Brian Maegraith, predicted in Liverpool this week.

Professor Maegraith, who retired in September as dean of the Liverpool School of Tropical Medicine, is distinguished for his efforts to publicize the dangers of transporting diseases from one country to another through air and sea travel.

Speaking of a recent case in which a doctor dying from the obscure disease Lassa Fever was flown home on a scheduled commercial flight, Professor Maegraith said: "This was wrong from all points of view. One should never send a person suffering from a disease about which you know little or nothing on an ordinary aeroplane filled with other passengers."

He was less worried by recent reports of samples of viruses or organisms sent to Britain for analysis breaking open in the post. "There is very little that could, however anybody which could be sent in the post over any great distance."

Professor Maegraith was speaking only days before the new wing of the Liverpool school, now under construction, was named in his honour by Mr Reg Prentice, Minister for Overseas Development.

Mr Prentice presented the school on Monday with a plaque to mark

the beginning of building operations. The Liverpool School is the oldest of a handful of schools specializing in tropical medicine and Professor Maegraith believes it to be the best of its kind in the world. It trains doctors from Western Europe and Scandinavia as well as Britain and the developing countries.

The new wing will house child health work, one of Professor Maegraith's special concerns and a development he pioneered at Liverpool over a decade ago.

He points out that there is one doctor to 1,000 people in Britain, while in Africa the ratio may be only one doctor to 1m, and there may be only one child specialist to 5m children. It was clear to Professor Maegraith that individual doctors would be helpless against such odds, so the Liverpool School has emphasized the value of the community health team. One specialist is a 12-month master's course in community health in which three months of the course must be spent working in a developing country.

Professor Maegraith campaigns tirelessly to warn of the dangers of importing and exporting diseases. Malaria remains the chief threat and continually destroys the World Health Organization's hopes of total eradication.

Bacterial diseases are an increasing worry and the production of vaccines contributes inadvertently to this danger. Professor Maegraith points out: "As the demand for



Professor Brian Maegraith

monkeys for the production of vaccines increases, hunters go farther into the forest and come across diseases that mankind has never met before.

"The animals are sent back to Europe and in no time these diseases spread to man. In the case of Marburg virus disease, eight out of 14 people who handled the infected monkeys died."

Professor Maegraith argues that if diseases are not continually to be exposed to other countries, they must be controlled at source. He believes that the school's international reputation is based on its policy of equipping doctors with the medical and organizational tools to tackle tropical diseases in their countries of origin. Our impact on the tropics must be in the tropics," he said.

Ministers petition Mulley to block college closure

by David Hencke

Two Labour ministers have met Mr Mulley, Secretary of State for Education, in a last minute effort to prevent the closure of St Peter's College of Education, Birmingham.

A decision is expected today on whether the college, one of five threatened with closure by a working party of the Church of England Board of Education, will be reprieved.

Mr Howell, Minister for Sport, and Mr Jenkins, the Home Secretary, are both Birmingham MPs. All 10 Labour MPs for Birmingham have sent a telegram to the General Synod of the Church of England expressing disquiet at the possible closure of the college.

During the meeting with the two ministers Mr Mulley is said to have been concerned at the pressure of the Department of Education and Science officials are applying to the Church of England by stating that some colleges should cease teacher training.

Mr Mulley has asked for more details on the effect of the college closure on the deprived area of Salford.

On Tuesday a petition from Salford residents was handed to Mr Mulley and a deputation went to see the Archbishop of Canterbury at Lambeth Palace.

Mr Charles Buckmaster, principal of the college, said in a press statement this week, that of the 198 students who left the college this summer, 148 had stayed in the West Midlands. A survey of 161 schools in Birmingham showed that out of 2,215 teachers, 255 were trained at St Peter's.

The other four colleges threatened with closure are Culham, Abingdon; Hockerill, Bishop's Cleeve; College of All Saints, Tottenham; and St Katherine's, Liverpool.

Teacher training at Culham, Poulton-le-Fylde or Chorley colleges of education is certain to end within the next four years once the colleges are merged with Pymsey Polytechnic.

Talks have begun with the polytechnic on the rationalization of teacher training which will be cut from 1,600 to 550 including in-service, induction and the training of teachers of mentally handicapped children by 1981.

Course proposals flood in as colleges diversify

Efforts to diversify at colleges of education are greatly increasing the number of course proposals put forward to Regional Advisory Councils.

The biggest increase is in the London and home counties area where proposals put forward by colleges seeking London University validation has contributed to record 25 per cent increase in courses coming before the RAC. Applications seeking approval reached 1,014 compared with just over 800 last year.

Reports from the remaining six out of 10 regional areas show mixed response although Wales, the South-West and the North of England follow the London trend. East Anglia, which has few colleges in the area, shows a decline as does the East Midlands. The Southern region has remained static.

In Wales the number of courses seeking approval has risen from 155 to 191 between 1972 and 1974. In the South West this figure has grown from 213 to 263 with 25 proposals coming from colleges of education.

In the North of England figures have grown from 262 to 287

although in the East Midlands they have declined from a peak of 35 to 29.

In the Southern region the figures have grown from 150 to 153 but in East Anglia they have dropped from 166 to 136. Figures were not available from the North West or Yorkshire and Humberside.

A spokesman for the Southern region said that the variation between areas could depend on how tightly regional advisory councils had interpreted the procedures for course applications from the colleges. In the Southern area discussions with colleges has led to comparatively few proposals being submitted by the colleges.

In London one record shows that a meeting held in 1973 had no fewer than 50 proposals for Diploma of Higher Education and other courses. Figures for course applications, while only a rough indication of trends, will confirm the fears of many polytechnic directors that college closures are flooding the market with proposals that few courses might attract few students.

'Schools need archaeologists'

A call for the introduction of specialist archaeology teachers in schools was made last week by a Cambridge University archaeology professor.

In his inaugural lecture, Professor Glyn Daniel, Disney Professor of Archaeology at Cambridge, said: "Archaeology is more and more being taught in schools. I used to think that archaeology could be dealt with by informed teachers of history, classics and geography. I do not now believe this is possible and we shall have to have archaeology teachers in our schools."

Professor Daniel said that he had been asked by the Department of the Environment, through its chief archaeological adviser, to write a report on university archaeology teaching and on how higher education could produce people suitably trained for Government archaeological service.

In the current financial difficulties, Professor Daniel said, universities should develop the teaching of specialist teaching in archaeology, but there is a limit to what they should do by borrowing teachers from other universities. Cambridge has a chair of American archaeology and a chair of historical archaeology.

Letter, page 11

UEA computerized

Administration at the University of East Anglia is to be computerized. The university has just installed a new ICL 2900 computer to be used for much of the work done in its registry.

Don's diary

United élite

Saturday: Two hours assessing publications of Canadian professor who is applying for tenure. Dull beginning to this diary because much of a professor's work is routine.

11.30 am. Squash with Trevor Myers, metallurgy department. Lost. Afternoon. To Old Trafford, home of élite, with daughter and friend from Didsbury College. Pearson scores best goal I've seen for a year, and we are transported as United beat Arsenal 3-1.

Love football, but sickened by obscene chanting and jeers at injured opponents. Only way to change this is to impose civilized standards in schools. When I played soccer at Pembroke, Cambridge, we banned a student permanently for continual arguing with the referees. A great tradition.

Evening. Out to dinner. Host's daughter, aged 11, tells me how boring she found her school Speech Day. Colly-wobbles inside as I reflect I'm guest speaker at Bolton School Speech Day next Wednesday.



Stuart Pearson: part of Manchester United's tradition of élite.

Trollops

Sunday: Check my review of C. P. Snow's *Trollops* in Sunday Telegraph. The proof that "Trollops" on three occasions. Fortunately it has been properly corrected. Prepare speech for Bolton. Impossible task of making speech suitable for younger children, teachers, staff and parents. Plan to start with farcical remarks about de-schooling, anecdotes, jokes and then to move to serious analysis at sixth-form level of crisis of forms in education and the Arts. Secretary hope previous speech will be boring because in reaction children will laugh more readily at my jokes.

Such ceremonies should continue. Those who want a non-competitive society, forget that academic merit should be seen to be rewarded. Disastrous if habit of listening to speeches should die. Children find listening, as opposed to viewing, more difficult. And so I submit to suffering and agree to go to speech day.

Afternoon. Take visiting Japanese professor, his wife and six-year-old son to Lyme Park. Problems of courtesy. They ask if shops are open so they can buy present for my wife who is providing tea. Should we have taken a present when we visited them?

Evening. Excellent dinner party, mostly non-university. Advantage of Manchester is that social life not confined to university circles. Leaving Hall last week middle-class woman boomed near my ear: "This is an intellectual desert." Rubbish!

Melancholiabore

Monday: Late out of bed. Reflect guiltily on all those THES diaries already at their desks or on early morning train at 6.45 travelling to distant conferences. No point in driving to university until traffic slackens about 9.30 am. After breakfast continue reading. Saul Bellow's *Humboldt's Gift*. Strange that so many books since

war take for granted that literature is in decline. Since 1945 we've had a great crop of literature—Pamuk's *Dr. Zivago*, Grass's *The Tin Drum*, Solzhenitsyn's *One Day in the Life of Ivan Denisovich*, Plath's *Ariel*, Lowell's *Life Studies*, Larkin's *Whitman*, Williams's *Bellos Herzog*, and the best reason for emigrating to the United States.

Twenty-five minute drive to the university off-peak. Begridge waste of time. Mail includes six submissions for *Critical Quarterly* which I edit with Tony Dyson. Poems from Larkin, Plath, and others. Poems from Liverpool post.

Morning mainly administration. Can a student be exempt from subsidiary English because of three years previous study at polytechnic? Yes. Discussion with third year students on her BA dissertation on Restoration Drama breaks the monotony.

Seminar on D. H. Lawrence. Six-week graduate course on Lawrence in Canada a few years ago was among most successful of my teaching experiences. Danger that success may be because students' inhibitions break down, and they find psychological satisfaction little to do with realities of Lawrence's art. Same effect of breaking taboos can also be dangerous result of creative writing sessions. Try to keep my seminar close to the text.

Third-year honours students a delight to teach. So keen, so intelligent, so much more able than when they first arrived. Feel optimistic about the university system. Do the Labour Party really want open entry?

4 pm: Chair poetry reading by Simon Curtis, comparative literature, and Michael Schmidt, our poetry fellow. Mainly for first year students. Simon reads from his first book, *On the Abhorrence Road*, to be published next month by Davis-Poynter.

He argues that in 1970s we are seeing a new formalism. Are we moving forward in education and the arts, to emphasis on structure, order, discipline? Michael also favours formalism, but interprets the word in a different way. During the past 20 years most of my mind and rectify injustices. Impossible to operate the present system fairly.

Evening. Editorial meeting of *Poetry Nation*, which I help Michael Schmidt to edit. Originally we decided to publish twice a year, partly because my experience with *Critical Quarterly* had taught me the hard way the enormous workload involved in editing a quarterly. Now consider this a mistake as sense of continuity. We decide to come out three times a year. Edit university committee work because so little is done. Editing *Poetry Nation* and *Critical Quarterly* is a joy because we can make decisions quickly.

Is poetry a dying art? Certainly poetry is the dominating form of this decade. Yet Plath's *Unlabeled* and Hughes's *Crow* aroused enthusiasm among students. Small magazines vital to provide outlets for young writers now commercial publishers are cutting their lists. Can we create a new audience? Sad that so few teachers of English read new poetry. Something wrong here.

Trapped nuns

Tuesday. Join the early morning set. Commuter "cattle truck" train to Manchester. I'm writing this diary. He goes silent. Catch 9.23 to Bangor, where I'm to viva PhD student.

Approaching Bangor recall *Critical Quarterly* conference for two years ago in 1965. Administrative problems were legion. Twenty nuns found themselves locked in hall of residence, had to climb over by one through a window to attend early morning train.

These days we thought we were leading a campaign to increase readership for good literature, to extend high culture to as large a number of people as possible. To breakers continue reading. Saul Bellow's *Humboldt's Gift*. Strange that so many books since

Free speech for closed minds



KENNETH MINDOGUE

It used commonly to be complained that linguistic philosophers revealed their remoteness from the lives of their fellow men by the triviality of the moral problems they discussed: the obligation to return books to libraries, or the keeping of promises in social matters. Led by Professor R. M. Hare, they responded by moving to the other extreme and became preoccupied with the melodramatics of Nazism and the Vietnam war.

These philosophers are pretty inelegant about inventing new examples (for how many centuries have we been tugging with red patches, bent sticks in water and disappearing cat's tails?) this shift of the exemplification stock of the discipline of philosophy is likely to be with us for a long time yet.

These reflections arise from browsing through the Spring 1975 issue of *Radical Philosophy*, unlikely because "radical" describes a collection of more or less scattered conclusions about practice, whilst "philosophy" describes an academic inquiry into theoretical presuppositions. The title indicates one more of those sometimes stimulating but always unstable hybrids which result when philosophy is yoked to any word describing fixed conclusions, like astrological, Christian, and so on.

Still, thinking with curbs on is better than no thinking at all, and intellectuals, being a species of print junkie, will always find things of interest in any argumentation. In this particular number the central theme is the freedom of speech and academic freedom in terms of the Huntingdon affair at Sussex written by one of the main participants in the drama, Professor Roy Edgley. It is a complex piece in which evident contradictions are combined with equally evident hits or some commonly used defences of the right of freedom of speech; and it illustrates very well the new tendency in moral philosophy to suffer from melodramatic distortion.

This can be seen in various places. One is the occasion when Professor Edgley suggests a moral identity between Professor Huntingdon and Lieutenant Calley by the device of distinguishing them in another and (in this context) trivial respect: "Unlike Lieutenant Calley," we read, "Huntingdon was a theorist."

An example of more general significance arises when we encounter a hypothetical case designed to wring the withers of any liberal defender of free speech. Indeed, wringing the withers is altogether too gentle an expression. Professor Edgley wants to shoot them right off.

The situation he poses is that of a classroom of students and faculty giving a respectful and dignified hearing to a learned paper proposing the final solution to the Jewish problem, followed by a scrupulously detached and academic discussion of the technical problem of how to dispose of all the bodies.

We must take it on its own terms as a situation which Professor Edgley imagines must force an instant capitulation of the obstinate reader, leading to the throwing up of hands in horror and the conclusion that such a discourse must be given a disrespectful and undignified hearing.

Yet is it in fact the case that loud and noisy shouting would be the proper response to such an event? By and large, shouting and jeering are the activities of the irrational and morose. No proposition becomes true by being repeated; nor does a value become more rational because it is expressed with massive lug power.

No doubt Professor Edgley would agree with this view, particularly in

such cases as that of the Nuremberg rallies or Nazi disruption of academic occasions. What is it but a dogmatic conviction of their own righteousness which puts the Sussex disrupters into a different class?

But it is not the point. What is vital is to stop so lunatic a proposal from being carried into effect. An objection of this kind raises the question of whether noisy protests are a sensible response to the hypothetical case with which we are presented. The disruption of Professor Huntingdon's lecture could not have prevented the policy on which the objection was based, but it might have led to a better understanding of that question.

But where, we may ask, are those apathetic and uncommitted souls who, in doubt about what to think about Professor Huntingdon's advisory thoughts about the Vietnam war, said to themselves: "Huntingdon must be advocating evil practices because of these young persons at Sussex shouted him down and behaved with the utmost rudeness." I have not met any; no doubt one or two might be dredged up from the further shores of doubt, but there cannot be many.

The testing behaviour of the fashionable kind—the behaviour Professor Edgley seems to be defending as a legitimate limitation on the right of free speech—will no doubt be extremely profitable. But I am not actually intensifying rather than shake the convictions of whoever is subjected to it. These convictions will be given wide publicity. And he will receive from very many people the sympathy appropriate to a victim of bad manners.

In many cases, a courteous and well-reasoned moral argument will, even in these practical terms, be more effective than the nastiness of protest. And if it be objected that this is a milkop position, the answer is that the only really effective way of stopping the advocacy of genuinely evil courses of action without simultaneously opening the door to sectarian thuggery is by the use of legitimate State power.

This is a recourse of last resort in any liberal society but, for as long as the world is ruled by the self-interest of the few, free speech is not an unconditional value. If it were then libellers, slanderers, bomb hoaxers, and the humourists who shout "Fire!" in crowded theatres would be unrestricted. But freedom of speech must be distinguished from academic freedom, even though in liberal societies the two things come in practice to much the same thing.

If we do make this essential distinction, we shall observe that the advocacy of the final solution from a university rostrum is academically objectionable not because it is an act of war against all. For the fundamental business of universities is not with proposals but with hypotheses.

This complicated but quite vital distinction is obliterated by the insouciance with which Professor Edgley uses the word "theory". Sensibly noting that many descriptive utterances are practical in their import (and therefore that the line cannot be drawn in terms of facts and values), Professor Edgley hastens to the conclusion that a theory is equally and in all essential respects yoked to practice; and for him "practice" means a complex box of doctrines associated with the word "society".

There are two divergent ways of dealing with the freedom appropriate to an academic rostrum. One is in terms of principle; and the other is in terms of manners.

Argument in terms of principle is concerned with ideas like tolerance, freedom, open and closed minds and similar abstract categories. It opens up the delusory promise that it might ultimately yield a position so watertight as only to be invaded by self-contradiction. But this remains a promise of intellectual power is undermined by its inevitable indeterminacy.

There is another and less frequented path. It consists of advancing a practical argument about the requirements of civility and the advantages of good manners. Manners are an important part of the proper response to such an event? By and large, shouting and jeering are the activities of the irrational and morose. No proposition becomes true by being repeated; nor does a value become more rational because it is expressed with massive lug power.

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Brian Cox

The author is Professor of English at Manchester University and co-writer of the *Black Papers*.

Civil Service talks begun to settle fees dispute

The Association of University Teachers has started talks with the Civil Service Department to try to improve the rate of fees paid to academics who undertake work for the department.

The AUT claims that there has been growing discontent recently over the rate of fees paid by the Civil Service and the "bureaucratic procedures" which the department has laid down regarding tax and national insurance.

The rates are based on the grade of person carrying out the particular job and whether the work is classified as consultancy or lecturing work. The AUT says that for consultancy work a university staff member who is a professor receives between £20 and £25 a day. For the same work a lecturer receives between £13 and £16 per day.

Mr John Akker, the AUT assistant general secretary, said this week

that the rates had little relation to the work which the university teachers were asked to undertake. He also claimed that if the AUT members did not make sure the national insurance calculations were correct fees were even less.

However, Mr Akker said that since difficulties had been shown to exist in calculating the right contributions, the Civil Service Department now proposed discussions with the Department of Health and Social Security to simplify the procedure.

It had also been reported that the Inland Revenue no longer wished to deduct tax on the travelling expenses connected with Civil Service work.

Mr Akker said that the AUT would be taking special cases of its members who felt that they had been treated badly in the past over travelling expenses.

News in brief

First among many

Almost one in five students reading Greats—classics and philosophy—at Oxford got a first this year according to figures published this week by the university. This was twice the number who gained a first in English and history.

Only about 8 per cent of philosophy, politics and economics students and about 7 per cent of the modern languages got firsts.

The task of the scientists and technologists was not easier, either, with nearly 10 per cent of the engineering and 10 per cent of those studying physics in the first class. The physics and chemistry students came close to the classic's near-20 per cent rate.

However, theologians had the lowest rate of firsts at just under 4 per cent.

Library grants

Manchester Polytechnic is organising a management game for students in the North West of England. Participants will use the polytechnic's computer programme to take decisions relating to the marketing, production, research and development of a company in a highly competitive situation.

The winners will spend five days visiting industrial organisations, take the BBC and receive a cheque for £100.

Soviet trips for 100 scientists

A chance for more than 100 British scientists to make short visits to the Soviet Union and other Eastern European countries is provided, under two-year cultural agreements arranged by the British Council.

The agreements, which are running from 1974 to 1976 or from 1975 to 1977, provide for short visits of usually two weeks and medium-term research visits of two to six months. One-year scholarships are also available.

The visits are to encourage the exchange of information and further cooperation in the areas of science, technology and agriculture. Other countries involved are Czechoslovakia, Hungary, Romania and Bulgaria.

The British Council usually meets the cost of the return air fare and the host country meets the cost of subsistence and internal travel.

For details and application form from the British Council, 10 Spring Gardens, London SW1A 2BN.

Sports centre opens

Students and staff in Strathclyde University will this year be able to use a large new indoor sports centre which forms the first part of a £250,000 sports and staff club development. The centre includes a gymnasium and a multi-purpose hall for basketball, volleyball, badminton, table tennis and golf practice rooms.

Frances Gibb meets two British academics bound for the European University Institute

The world's the limit at think-tank monastery

Next autumn the new European University Institute will receive its first 50 students at the Bu dia Fiesolana, a thirteenth-century monastery overlooking Florence.

Presently run as a school by the Scalapian order it is a fitting choice of home for the students whose research will be across cultural and interdisciplinary.

The history of this first major EEC venture in higher education, mooted 15 years ago, has been beset with difficulties, delays and discouragements. But then a meeting of the six ministers of education in 1971 at last provided the stimulus for action and the institute's convention was ratified at the beginning of the year. On February 1 the new European university was officially in existence.

Already the academic council has met, attended by its eight founding professors (two in each of the institute's four departments: law, economics, history and civilisation and political science) and by Professor Max Kohnstamm from Holland, its rector, and Dr Marcello Buzzonini, its Italian secretary.

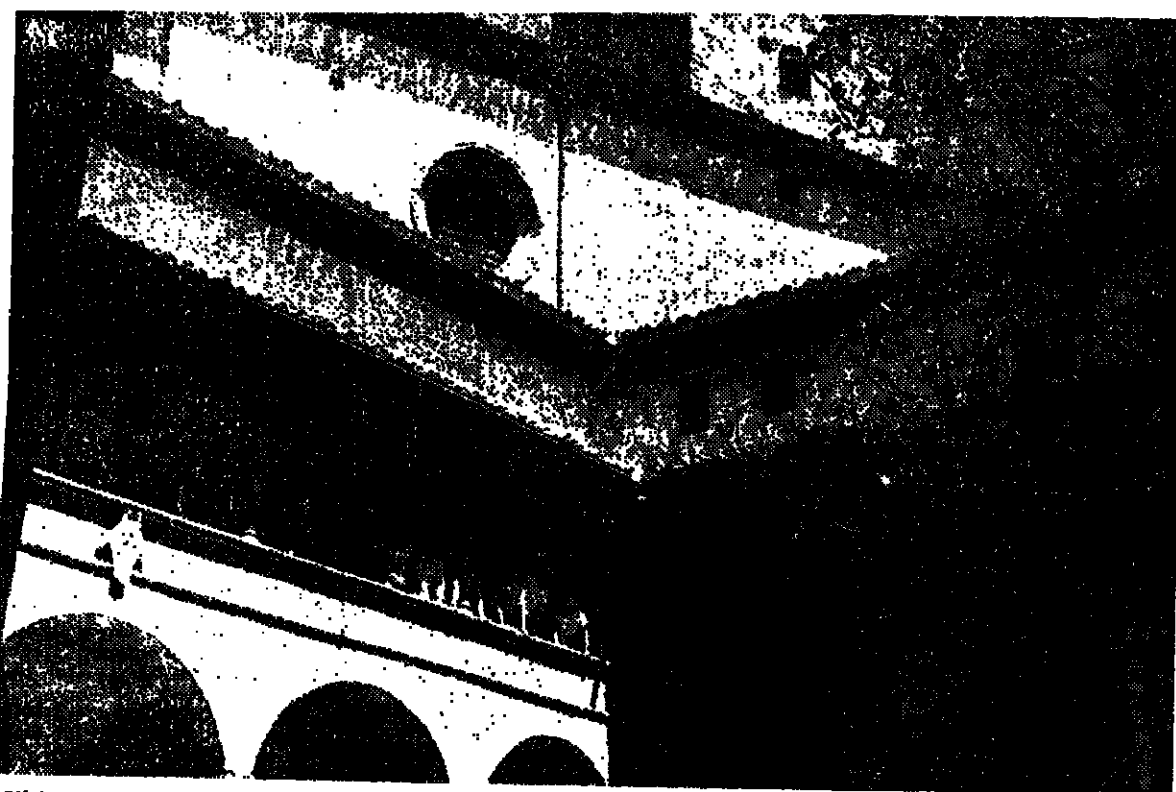
Britain's part in the formation of the university will be primarily played by two academics: Professor Charles Wilson, professor of modern history at Jesus College, Cambridge, one of the founding professors, and Dr Kenneth Humphreys, of Birmingham University, who has responsibility for the institute's library.

Both left their present posts for Florence last month and are enthusiastic about the institute's future. "The important thing is that we are going to be associated with the rest of Europe in trying to develop a very important cultural centre concerned with academic research by students from all over the world," Dr Humphreys remarked.

"It is a magnificent opportunity for intellectual exchange," Professor Wilson said. "We got very few Europeans in our universities; most are from the United States or Australia and the Commonwealth. I hope the institute will act as a clearing house for this."

Its work will be entirely at post-graduate level, hence its emphasis on research, with some of the functions of a "think-tank" in the as yet relatively unexplored area of European study.

Both academics see its work in two areas. First, specialist research of a European nature, which it would obviously do better than local or national institutions. This might be on EEC institutions, law, history, economic problems, and



Visitors at the Bu dia Fiesolana on the outskirts of Florence which will house the institute.

provide scope for much comparative study of these disciplines. "The average university does not often go outside its own boundaries," Professor Wilson said.

Second, research linking or comparing Europe with the rest of the world. "I find a strong feeling among all that it would be ridiculous to limit our inquiries to Europe," he said.

Links both with other universities and countries outside Europe are going to be necessary from a purely practical point of view. Staff at the institute will never number more than 50 and students—planned to reach about 300—will need outside contacts.

They will also need to use other libraries, both in Italy and outside it, Dr Humphreys said, because it would be some time before the institute's own library could cater for all its needs. He envisaged students spending an occasional term at other universities and other students coming to Florence.

For each the move is quite a break with the past. "I had to make a leap in the dark in that I went on the assumption that I would have to give up my post at Leeds," Dr Humphreys said, "but in fact, Dr Humphreys and I have been very understanding and have

granted me a secondment for three years," Professor Wilson said. His name was put forward on account of the European nature of his research which includes Anglo-Dutch relations from the sixteenth to the twentieth century.

Dr Humphreys already had some connexion with EEC higher education in that he has been president of the universities' section of the International Federation of Librarians and has been an adviser to the EEC libraries. For him it is a move from an established and large library at Birmingham to a place where he must build from scratch.

Although a centre for research, the institute will not follow in old traditions of isolated study. There will be much teaching, mainly by seminar rather than formal lecture or tutorial. Students will be awarded a doctorate.

The teaching method will affect the work of both academics: "I've got to make sure my French is at least good," Professor Wilson said, "and also be able to cope with questions asked in German or Italian."

The seminar teaching will mean for Dr Humphreys that more multiple copies are likely to be needed. Links with the departments

will be particularly important. "I'm a member of the academic council so I meet the professors where questions of policy related to the library are discussed. We have to take into account the needs of the teaching staff; they are drawn from the nine countries so we have to bear in mind not just to buy English books."

His brief is first to build up the library—books will be bought in all the five official languages, English, French, German, Italian and Dutch—and also to develop it as a documentation centre, providing a giant indexing system on all subjects taught at the institute.

The basic budget is £500,000 provided from the institute's common funds, with capital costs, such as shelving, provided by the Italians. The library will be fully automated, with a mini-computer to keep records. It is hoped to open next year with some 30,000 to 50,000 books and 1,000 periodicals.

How will he select books? "There will be differences in the extent of literature available in different languages so we will just see how it turns out. I would say law, for instance, will have to be a larger collection than politics or

economics, which are international subjects. With law all countries will have to be represented, as will economics.

A second function of the library will be to develop an international library lending and cooperation. "It can be a focal point for the development of librarianship in Italy and in Europe generally; a centre of excellence in every respect and a focal point from the professional library aspect."

Language will also be something of a problem in his department: "To say that some institutions are to be first class and others second class and set about that as a matter of policy does not really seem to me to be the way of going ahead."

But a further point is that, serving our universities as a whole, it is difficult to generalize in terms of one university being better than another. But some departments in some universities are absolutely first class and better than other departments in other universities.

So when you are talking about excellence you should not just be thinking in institutional terms. CANE: What are your own views on the role of the polytechnics?

CROWTHER-HUNT: The thing that distinguishes the polytechnics from the universities is that the universities are ivory towers while the polytechnics liaise with industry and produce purely vocationally orientated courses. A large number of universities especially the departments of advanced technology I have often heard of as being a great deal of truth in it, are better polytechnics than lots of the universities.

The big difference is that in the polytechnics you do have courses at a significant number of different levels. It is an important difference and there is a great deal to be said for it. Their emphasis on part-time and sandwich courses is another important function.

Commitment is there in terms of enthusiasm and also in financial: each state has subscribed to the convention on the basis of its budgetary commitment to the EEC. So far the British Government has supported the venture generously, but there has been a decision as yet on the question of special grants for students going to Florence.

With the backing of Lord Boyd, vice-chancellor of Leeds, and Mr Ralph Toomey, under-secretary at the Department of Education and Science, however, who are both on the institute's governing body, support is bound to be forthcoming.

Alan Cane concludes his two-part interview with Lord Crowther-Hunt, Minister for Higher Education

The impossible road to centres of excellence

CANE: What is your view of the idea which has been floated that, say, 10 universities should be selected as centres of academic excellence and funded as such?

CROWTHER-HUNT: If anyone wanted to proceed down that road, it would be very difficult to pick out the 10 universities. In any case, as I said at Nottingham, I believe the question of excellence versus equality to be a false dichotomy. We really want all institutions to be excellent in their different ways.

To say that some institutions are to be first class and others second class and set about that as a matter of policy does not really seem to me to be the way of going ahead.

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But with the best will in the world there is bound to be a very great deal of overlap between the provision made in the universities and the provision made in the polytechnics. I am not using the word wasteful but you cannot say that there is a sense of necessarily one degree course is something that could only be run in a polytechnic and another only at a university.

You can also justify the position of the polytechnics in terms of a pluralist concept of society, in that it is important to run institutions of excellence, one lot independent of the government and another lot who may be doing similar things but much more subject to direct democratic control. You can actually argue that this is a democratic good in a pluralist society and that even if the polytechnics and the universities were doing exactly the same work it is for the democratic good if one side of higher education provision is much more directly under democratic control than the other part.

CANE: Should polytechnics have a bigger stake in research or is multi-level teaching their chief strength?

CROWTHER-HUNT: Multi-level teaching takes you into the research area. Research in connection with local industry is a very important role of a polytechnic or any institution of higher education—the universities have a role here too. A lot of polytechnics are doing very important work in this field and I think the universities should stop.

If we are really trying to meet the needs of industry, I do not see that we can cut ourselves off from meeting some of the needs in practically orientated research. It is just as important as fundamental research.

CANE: What do you see as the priority areas in higher and further education?

CROWTHER-HUNT: One of the Government's priorities is for the 16 to 19-year-old age group. The Secretary of State has said that the first priority is for those who have just started to be at school from five to 16. The priority after that is the 16 to 19 age group. We are very concerned indeed about this group because it includes all those going on to any form of further education. Day release has fallen off and we are very worried about that.

In West Germany something like 80 per cent of 16 to 19-year-olds go into work to get some form of further education. If you compare us with that it is lamentable, particularly where girls are concerned. We want to do something about this. You were quizzing me on the figures we all know—the £40,000 full-time degree students by 1981. What we tend not to know about are the figures which show that in 1974 there were 225,000 full-time and sandwich students in the non-



Lord Crowther-Hunt

advanced sector of further education and our general planning exercise says that there would be between 340,000 and 350,000 of those by 1981 and that the number of part-time day-release students would increase from about 650,000 now to 750,000 by 1981.

We are giving great priority to this area and we want a great expansion in the numbers. CANE: How will you set about doing this?

CROWTHER-HUNT: There has been a lot of interdepartmental work on this—I was meeting the TUC the other day—and I have met other outside bodies too and now only the crucial decisions remain to be taken. But all I can say now is that we shall be having a conference in the new year on education generally. We shall be looking at the idea of the conference was to discuss whether the concept of the "Open College" could offer something to the educational provision of the 16-19s and to adult education generally. Now we have broadened its range to consider the overall needs of this group of 16-19 year olds preparing for work.

We shall be looking at how we can expand provision for them and one of the aspects of this is educational technology. We shall be looking to see if some package of Open University teaching techniques—radio and television broadcasts, correspondence materials, excellent textbooks and face-to-face teaching—can be geared into the work of the further education colleges.

Anything of this kind that might be done would be run by the individual colleges who might use and adapt packaged material from the centre.

For the 16-19 age group motivation is the important factor and if you can produce something that helps towards more imaginative teaching in colleges of further education—streamlined courses or whatever—then it

could provide for the education of more people in a more imaginative way at less cost, and this would be helpful.

CANE: Could you tell me something of the present position on regionalization in higher education?

CROWTHER-HUNT: There are many different strands here. First, we have sent out a discussion document based on the proposals of the Council of Local Education Authorities. We have asked a series of questions about those proposals which are aimed at producing a more effective and more comprehensive regional structure and the answers are expected sometime in November.

Second, we are all waiting for the report of the Layfield inquiry into local government. We have no idea what Layfield is going to say and no final decisions can be taken in the regional context until we know what Layfield says.

In the longer term there is the question of devolution itself and as you know the Government has committed itself to direct elected assemblies for Scotland and Wales and a White Paper is expected in November on this.

CANE: Vice-chancellors and principals tell me they feel at present as if they are planning in total darkness—do you have the same feeling here?

CROWTHER-HUNT: I don't think it's total darkness, but I think one of the difficulties at present is obviously the extremely serious economic and financial situation. It really is not possible to see far enough ahead to do really long-range planning.

I know the universities are particularly worried; their financial planning at present is on an annual basis. They want to move to longer-term planning and so do we. I think it would be right to have a local authority sector to get back to longer-term planning. It makes for much more efficient use of resources in the end.

Size is not everything at steady Liverpool

Liverpool is already virtually a steady-state university. Despite an encouraging growth of almost six per cent in undergraduate numbers this year, many departments in arts, science and engineering failed to make their targets and there seems little hope of change in a pattern which has seen undergraduate numbers grow by only five per cent since 1969.

This is partly due to a conservative academic staff attitude that size is not everything. Professor F. W. Walbank, dean of the arts faculty, tells the story of the questionnaire sent to staff to elicit their views on how much the university should grow. The administration was considering figures in the 5,000 to 9,000 range, many academics suggested 2,000. "Many people feel we have lost a lot through becoming bigger," he concluded.

Some departments have found retaining small a double-edged sword. Law, for example, is heavily oversubscribed and the staff put immense effort into their teaching but they pay for this in a staff-student ratio of 18.6:1, thought to be the worst of any law school in the Commonwealth.

Recruitment of staff in specialist areas like law where the practitioners can win high salaries is in any case very difficult. Dr T. Thomas, Liverpool's vice-chancellor and a lawyer, points out: "We have recruited a law lecturer from Liverpool Polytechnic this year and he is taking a cut in salary."

Other reasons for Liverpool's slow growth include a large and static medical school, dental and agricultural schools, but many would be likely to leave Liverpool for all the glory of the City of the Future, the City of the Future, the City of the Future.

For Universities do not exist only for the pursuit of knowledge, or even solely for the maintenance of teaching in an atmosphere of research. They are at instance of the freedom of individuals. And, says the author, it is not obtained by confining one.

The author is the Allen Cane of Philip Cane, who is professor of French at Leeds University.

change. In any case I agree with the view that this country is more likely to be saved by scientists and engineers than by accountants and probation officers.

Financially, the university seems relatively secure for some time. It made a saving of £1.5m on a total of £14m and Dr Thomas believes it will break even at the end of the present quinquennium "give or take £100,000".

About 50 academic posts remain frozen and repairs and redecoration have been drastically pruned and Dr Thomas points out: "Deferred repairs soon become replacements."

Some of the university's reserve resources have been used in keeping the university afloat but it still has a fairly comfortable cushion.

The staff-student ratio across the board is about 1:8 and Dr Thomas points out: "When the next UGC settlement is announced I would not expect Liverpool to get most favoured nation treatment. We will have to make do and take more students without recruiting more staff."

For a slowly-growing university like Liverpool, this means attracting students back to the under-subscribed disciplines, for example physics, chemistry, mathematics, engineering and modern languages.

Failure to do so will mean a rough ride for the university, Dr Thomas thinks, arguing that it has already become difficult for the university to take over research projects funded initially by the research council. A committee has been established to vet all research proposals going forward to assess how much of the university's resources will be committed through their acceptance. And research units outside the university will have to be charged.

Mr Roy Butler, academic secretary, says: "These people will have to find a new market for their talents." Professor Walbank emphasizes the special problems of the library, says: "Last year was terrible, we were in deficit right from the start and this year finance will be tight all the time."

Alan Cane

Dr Aloysius Graveyard answers Professor Philip Thody's attack upon him as a university committee man

A rave from the grave in defence of the administrators

Reports of my death, as Mark Twain remarked, have been considerably exaggerated. Professor Philip Thody's attack on my premature demise, involvement in administration has in fact given me a new lease of life. Work, as Voltaire observed, frees us from three great evils: boredom, vice and need.

Taking seriously the privilege of belonging to a self-governing organization ought also to have rendered impossible the mixture of inaccuracy, simple-mindedness and frivolity which characterized Professor Thody's supposed foreboding to the committees.

Thus Professor Thody lists as one of the "organizations" which really pull the strings, "the useful and unpretentious Universities." Central Council on Admissions. I note that he has in fact been a sleeping member of this organization since 1969, and am consequently surprised that even he should not know that UCAA merely does what the schools and universities represented on it tell it to do.

The quietly-spoken vice-chancellor who presided until very recently over its meetings has never been a man to "speak liberantly." One has only to remember what chaos reigned on the admissions front before 1965 to realize how much UCAA has done to allow students to devote more time to their teaching and research.

The Committee of Vice-Chancellors and Principals, as its name

implies, likewise only emanates from the universities themselves, and there must be a considerable number of conscientious and politically-minded students at Leeds who regard the attribution of absolute power to the National Union of Students as little more than a sick joke.

It is after all at Leeds that the technique of exploiting the in-built conservatism of medical students, engineers and applied scientists to block the legitimate expression of democratic forces in the students' union has been carried to a fine art.

By the simple device of cancelling two o'clock lectures and practicals, and when "crucial" votes are taken, the sciences professors have enabled everybody to vote. For an arts professor now to present his administrative colleagues as quietly acquiescent in the wishes of an emasculated student body shows a disingenuous, if not a mindless, attitude.

It is quite embarrassing to read an article the actual impact of which differs so completely from the intentions of its author. Thus the statement that university administrators wait for initiatives from the elected representatives of the academic body is clearly intended as a compliment. It is in fact an unperceptive insult.

The part of the administration in any organization is to select which tasks now have to be done and suggest ways of carrying them out. Were they not to use their experience, knowledge and expertise to select the academic colleagues they would be completely failing to earn their salaries.

It is also curious that a man who claims to have been involved in administration should not have noticed how subtly professional administrators can steer events in the direction which best pleases them.

How does Professor Thody imagine he got on to the committees which he lists in such immodest profusion? Because his junior colleagues thought he would protect and represent their interests? Or all for the best in the best of all academic worlds, he invited the input of those who had had no intention of manipulating the power structure and therefore had no intention of changing it?

For Professor Thody look around himself and see how many of his colleagues who ask awkward questions in senate or on the faculty board also find themselves exempted from key committees. He will then see why his presence was so encouraged for so long.

The crucial issues in any committee are its membership, the choice of chairman, and the writing up of minutes. In the committees

that really make the crucial decisions, the supposedly open elections to membership are an elegant farce, such as ghost riders in the sky. We are a youngish to middle-aged lot; everyone experienced but in different ways, although we have had no difficulty in getting on, as said.

Commitment is there in terms of enthusiasm and also in financial: each state has subscribed to the convention on the basis of its budgetary commitment to the EEC. So far the British Government has supported the venture generously, but there has been a decision as yet on the question of special grants for students going to Florence.

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The man who put the pep in psephology

The pattern of Dr David Butler's life is formed by general elections, rather than the lives of agricultural workers are determined by the seasons. He was born in 1924, on an election year both in Britain and in America. His Nuffield College fellowship dates from the announcement of the 1951 general election, when he began work on the first of his eight studies, written either singly or in tandem, of British elections. The latest, on the October 1974 election, in which his co-author is Dennis Kavanagh of Manchester University, is published today.

Did he, I asked, ever get bored with elections? "I have moments of distaste as I take up my pen yet again", he said. "But it's fun. It's an excuse to go around being people." Dr Butler likes to be at the centre of things, he is interested in people and above all he likes quick results.

Grey haired and dishevelled, he comes from a distinguished academic background—his father a professor of Latin, his maternal grandfather Professor A. F. Pollard, the Tudor historian, almost his entire life spent in the shadow of the universities of London and Oxford.

Dr Butler was schooled at St Paul's and then went to New College, Oxford to read history, quickly switching to PPE. While a first-year undergraduate, he "played around" with the 1945 election statistics. "It was an inheritance from a childhood obsession with wisdom."

'David's greatest service is to have monitored so many facts so prodigiously well'

So someone suggested that he go to see R. B. McCullum, who was then writing the first-ever Nuffield study, and the great father of psephology, and was immediately "ordered" some statistics, rather, recalls Dr Butler, as a nouveau riche would order books for his library. Dr Butler, therefore, wrote what he now calls "a crude and clumsy" appendix and from that began his career as the chronicler of our elections.

It was McCullum who invented the word "psephology" but Dr Butler first used it in print, on the very first page of the 1951 election study. It derives from *psephos*, the Greek word for the pebble that the Athenians dropped into an urn to record their votes. (The "e" must be long, says Dr Butler, otherwise people make jokes about syllables.) Now, Dr Butler regrets it. "It suggests that the study of elections is separate from the study of politics."

It was also in the early 1950s that Dr Butler began his celebrated election night appearances on television, as the donnish pundit who can tell you the swing in the results flash up on the screen and from it deduce the likely final result. Dr Butler could not be nearer the centre of things, nor could the results and the deadlines be more instant.

On television election nights, some politicians, emboldened by appropriate refreshment, have expressed anger at Dr Butler's omniscience. He had, they have suggested, taken the poetry out of politics, subordinating the blood and sweat of individual candidates to national swing and the expensively and carefully worked out strategies of party leadership to the bare bones of background and ancestral voting habits.

According to Dr Butler's study with Donald Stokes of Michigan of British voting behaviour, four elections are won and lost on "differential-factility" and "selective death."

The more recent Nuffield studies record growing public cynicism with party politics. Dr Butler himself is responsible. He said, very solemnly, on the 1974 election, "There is something in the charge."

And he showed me what he called an apology in the 1951 study: "If one delays the mystery of democracy, or fosters the idea that the actions which make up the democratic process are unimportant, one may breed cynicism. Knowledge about the nature of elections for the average citizen is a necessary condition for the exercise of a responsible vote. The more recent Nuffield studies record growing public cynicism with party politics. Dr Butler himself is responsible. He said, very solemnly, on the 1974 election, "There is something in the charge."

Then, of course, there is the famous remark that no individual candidate is worth more



than 500 votes. This, says Dr Butler, was first used by him in a newspaper article in 1955. But it was attributed to old Labour agent in Birmingham called Harold Nash. (Dr Butler, of course, would never have put it like that himself: he would have said that no candidate is worth more than 0.3 per cent of the votes).

When Dr Butler went to see Mr Nash in 1950, he was told: "My boy, no candidate is worth more than 1,000 votes." Dr Butler went to see him again in 1951 to see whether his analysis had changed as a result of the recent election and Mr Nash said: "My boy, no candidate is now worth more than 500 votes."

Dr Butler had never heard another Labour agent say that—the others all stressed the importance of a good candidate. Yet, within a few weeks of the 1951 article, it was part of the nation's folklore.

That, perhaps, illustrates one of the dangers of the Nuffield studies—their peculiar combination of journalism, history and academic analysis. Though academic disciplines of strict scholarship have occasionally been sacrificed to the journalistic disciplines of deadlines, most academics agree that the studies are a remarkable achievement.

"David's greatest service to us all," said one colleague, "is to have monitored so many facts so prodigiously well." Yet there is an agreement that, cumulatively, the academic importance of the Nuffield studies is slight.

There has been little attempt to inject into them the lessons about voting behaviour culled from the Butler-Stokes study. Nor are there many comparisons between the studies about elections. Though the section of the book devoted to an account of the previous years, the studies fail to relate elections to the general political process.

Dr Butler, say his critics, has become trapped in his own myth, like the writer of a football annual who must record all the son's goals and ignore what happens in mid-field. And, they suggest, he is now almost too close to the people and events he writes about, inhibited by his natural kindly desire not to be harsh to people he likes and by the pressure to ensure that as many worthy people as possible are given what Mr Ron Haywood calls "a mention."

"There is a danger that he is becoming predictable himself and producing predictable responses from other people," said an academic colleague.

Dr Butler's collaborators find him congenial to work with, but slow to accept ideas for changes in the studies. Dr Butler sees it like this: "Yes, my expertise can be a single conservatism. I make a habit of telling my co-authors that everything is up for grabs." Then, characteristically, Dr Butler's argument comes back on itself, and starts to eat itself up.

"I feel obliged to preserve the continuity of the classifications and the tables when they could be improved, because people refer to them and they need comparable data. If anyone else did it, he would be forced back into the same sort of thing. I'm sceptical that if some really brilliant perceptive scholar came along and took over the book, it would be very different, though it might be better."

Dr Butler says he is worried about the idea of hanging around and being a qualifying influence. But he says, a little reluctantly, "I'm not doing anyone any harm. I don't know of other people anxious to take the book over. I don't know of anyone who has been doing the same thing for as long." The Nuffield studies don't represent more than 20 per cent of my academic existence, I would be focussing on elections very hard, anyway.

Dr Butler describes himself as a contented man, devoted to his wife (daughter of a Justice of the Peace, Mrs. Jane Butler), and his three children, whom he has in his work, a household name. He does not have an outstanding analytic or theoretical mind, he says, only because it won't stay still long enough to complete a theory.

Why, then, should he move into other things? The Nuffield studies, along with the raw material, including hundreds of interviews with leading politicians, collected for them, will form a bedrock of evidence about contemporary politics for hundreds of years to come.

His time will still turn to them—a sort of Doomsday Book of post-war British politics—long after the fashionable theories of his contemporary colleagues have been forgotten. Dr Butler, it must be said, is wiser than his critics.

'New working class' clashes with 'Quaker paternalism'

Normal academic life at Fircroft College, Birmingham, was brought to a halt last spring by a bitter conflict between student activists, "paternalistic" governors and an "authoritarian" principal. The difference between this and similar conflicts elsewhere is that many of the students have spent years in employment and many have trade union backgrounds. In the words of one of them, behind particular issues lay an ideological conflict that was class based. Today the college is empty while a government committee of inquiry decides its future. Sue Reid reports on the background and the initial stages of the inquiry.

Fircroft college was founded in 1909 by Mr George Cadbury, of the confectionery family, and the Fircroft Trust was formed in 1923 to secure the future of the college. Today the trust still has full control in spite of a grant aid from the Department of Education and Science amounting to £64,000 in the last academic year.

Apart from minor issues like at Fircroft, apart from normal life up to the final months of 1974, it fulfilled its role as a college offering "second chance" education to working class men, mostly trade unionists, and was unique in offering a one year full-time course which did not involve any formal examination procedure.

In November 1974 the rift between the student body, the principal and the college governors became all too obvious. The National Union of Students called a nationwide strike. The Fircroft students, aged between 21 and 56, decided to answer that call and ignored a plea against strike action from the principal.

By last January a second issue was at stake. The £15 a head "capitation" fee awarded to each student at Fircroft by their local education authority was, said the students, their own to control. The college authorities argued that the student body should administer only the £750 fund. Eventually 80 per cent of the money was put in the students' hands.

At this week's public inquiry there was harsh criticism of the way the matter had been handled by Mr Tony Corfield, the principal. It was claimed he told one of the students, a retired telephone engineer formerly dealing with an annual budget of millions of pounds, that he was not responsible enough to administer the money.

Tensions at the college increased over the next few months, and in March the students called a full strike, as the result of a dispute over a telephone engineer formerly dealing with an annual budget of millions of pounds, that he was not responsible enough to administer the money.

The students drew up their own education programme and refused to recognize the principal. At the inquiry Mr William Lawrence, president of the Fircroft Students' Union, said there had been grievances among the students since the beginning of the year which came to a head at the education meeting. The new education programme worked well in spite of the fact that no particular individual controlled it. He claimed: "It could not have been under the principal's control because the students have lost all faith in him."

The situation was made no better by the attitude of the students towards the governors, who they described as the inquiry as having a "nineteenth-century paternalism". Mr Lawrence said the governors "were out of touch with the modern situation in education and otherwise."

Another student, Mr Malvern Foster, added: "When we arrived at Fircroft we felt we were being handed down crumbs from the rich man's table. The implication was that it was a working-man's Fircroft. We wanted it to be a working-man's Fircroft."

The situation at Fircroft was, said Mr Foster, alien to trade unionists from working class backgrounds. It became inevitable, because of the different attitudes to education, that conflict would arise. It was a basic conflict, he added, an ideological clash which was class based.

When the college first opened, the governors' "Quaker paternalism" might have worked but they were now dealing with a very different kind of working class men who had grown up with Jimmy Reid and Arthur Scargill. The folk heroes had changed, claimed Mr Foster.

In June, with the tutors still not involved in the clash, Mr Christopher Cadbury, the present chairman of the governors, announced that Fircroft was to close. From that time the tutors pressed for an official inquiry and declared themselves in dispute with the college authorities.

In written evidence to the inquiry they claimed that the immediate cause of the educational and administrative problems over the past five years at Fircroft, had been the conduct of the principal, which they alleged had raised the "gravest doubts as to his fitness to exercise his power in an educational institution, particularly one funded out of public money." They also claimed that the DES had failed in its responsibility to the college.

They recommended that in future the Fircroft Trust should withdraw all its interest in the college and that the DES or local education authorities should administer and fund it directly.

Mr Harry Newton, the senior tutor, told the inquiry the college had received "exceptionally favourable" treatment from the department, bearing in mind the cuts in education expenditure over recent years. The block grants to Fircroft, as a proportion of the college income had risen from 36 per cent in 1963 to approximately 80 per cent in 1974.

In the last academic year, he said, £530,000 was spent on the maintenance of the college buildings and grounds, the Fircroft Trust only contributed £2,000. In spite of the fact the buildings and grounds were owned by the chairman, Mr Newton also claimed that a "somewhat unconventional financial transaction" had taken place to paint a "less rosy picture to the DES than the accounts showed."

Mr Trevor Blackwell, tutor in English, questioned the acceptability of a publicly funded institution being controlled by a private trust which was not answerable to anyone. He emphasized that Mr Corfield had been forced by his personality or situation, to take an authoritarian attitude. The tutors also claimed there had been too much tight control of the college by the governors. Staff and students had been denied all but the most notional participation and consultation at a time when the education system and society at large had been giving increasing weight to these factors.

This view was supported by Mr Edward Locke, a former Post Office manager, who said the governors and the principal had reacted too fast. However, Mr John Bess, a student and shop steward, spoke out in support of the principal and governing body. He claimed student meetings during the dispute had been badly attended.

The last academic year at Fircroft ended in a split with the students still defiant. They were evicted after court action and by the end of July the college was closed. In August Mr Mulvey had announced the Government inquiry. Whatever the outcome the students themselves are adamant that there will be changes at Fircroft.

Fircroft College: "Implication was it was a working man's Eton"



Should entrance be easier?

from Dr K. J. Heskin

Sir—Now that the universities have again gone through the rigmarole of selecting students largely on the basis of their A-level results, should we not sit back and reflect on the logical basis of our selection procedures?

We know that A-level results are not, in general, good predictors of success at university although, intuitively, one feels that they may be more useful in some subjects (medicine) than in others (sociology). This means that journalistic articles which proclaim declining standards in universities on the basis of A-level grades are meaningless.

If the term means anything, then university standards must refer to the relationship between academic standards and the students who achieve at university and nominal qualifications and grades which universities grant them.

The crux of the matter presumably lies in the difference in objectives between school and university and the personality, character, level and type of motivation, skills and abilities appropriate to achieving the objectives within the different systems.

The public have a right to expect that academics take account of evidence on the appropriateness and efficiency of their various activities and act accordingly and that in our selection procedures we are playing around with people's lives in this distinctly irrational manner.

We must accept also that other charades such as extensive interviews are undoubtedly much less valid as predictors than A-level results. The interviewing syndrome is undoubtedly the most ludicrous of all since two interviewers would probably agree on the nominal, let alone substantive, definition of what they are looking for.

I therefore suggest the following solution. We must relax our entrance requirements and place less reliance on indices such as high A-level grades which we know are not particularly valid. The extent to which this change can be carried within any given subject would depend on the extent to which undergraduate courses take particular A-level subject standards as their starting point.

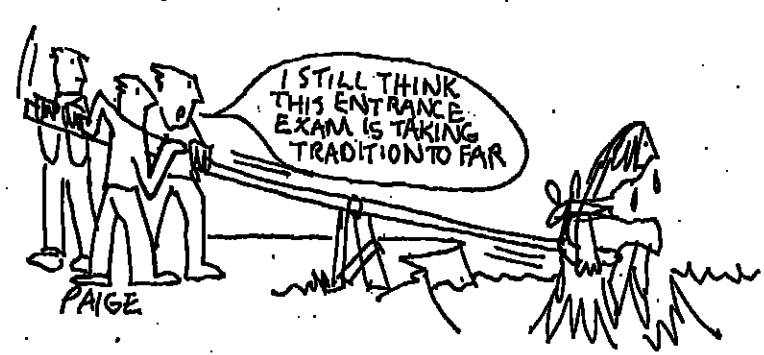
In all cases, however, the fact that individuals can, and often do, blossom intellectually in higher education despite having "failed" in secondary education, must be taken into account. We can then, in the usual way, sort out the sheep from the goats at the end of first year.

Since those who fail to meet the necessary standards would be required to leave at the end of first year, the system would not lower standards, as previously defined, in the slightest. Indeed, in unpopular subjects the standards would probably be raised since academics in such subjects must feel some pressure to preserve their student numbers and since genuine comparisons are much more readily made within a larger group of students wherein a broader band of ability is usually evident.

In addition, several other benefits would follow. Many more people

would have had the benefit of a university environment even if only for a brief period. The universities would have gained a pool of previously untapped talent. The capital assets of universities would be more fully exploited. And last, but not least, we could start the academic year feeling a little bit less uncomfortable about our involvement in a system which we know is both inequitable and wasteful.

Yours faithfully,
K. J. HESKIN,
Department of psychology,
New University of Ulster.



from Miss Diana Philpot

Sir—When I went back to school this year, I walked into a classroom where about a hundred young sixth formers were being talked to by one master. "Oh no," I said, "you're upstairs." The Oxford hopefuls that were there, the rats of teachers to pupils was one to two, a distinct improvement. The clean jawed staff looked at us with a mixture of loving pride and apprehension.

On the one hand, we nursed some private glow of achievement at our A-level results but we just wanted to get up and scream when we heard of someone else's brilliant grades. This was the reaction to the tension.

You see it is very difficult to cope with a thinking mind which is supposed to see both sides of the question; following instructions from on high to broaden my reading of newspapers. I dipped into the *Observer* and the *Times* (October 10) and read an article which discussed such issues as "the clumsy insensitive juggernaut, the advanced level examination and concepts such as 'the Godless UCCA'."

Keen readers will at this point cry that the journal is not designed for prospective university students but for teaching academics. Right, I will just venture to say that, speaking as a particle which has just emerged from the A-level system and which is just being ground around in the UCCA one, I find it difficult to take an objective view of the system because I depend on it.

There are dodges however, in the same newspaper I read about a history master who made his pupils read one of the very latest monographs, and then recycles it in their entrance papers. They were given places because their work seemed to show them to be brilliant and original thinkers who had been badly taught.

This was of course an extreme case, our teachers do not seem to be so very dastardly! We are

pursuing this term's work with such maxims as "Be yourself!" and "Beware of nice men interviewing." (I) buzzing round our minds. A pull of mystique is cast around Oxford akin to the one which used to envelop THE A-LEVEL EXAMINER: that unknown and unpredictable being.

There is, too, a cloud of intrigue and malice with a few people making remarks like: "Oh what college have you put down first. So and so? Oh no, they're very bad academically."

As for people who have had interviews, well! One came back

with a list of questions like "Well how did it go?" was made and immediately there was complete silence in the classroom as everyone's ears became like sensitive radar.

We have to keep our brains wound and running utterly smoothly. It is a stimulating experience for we have not only to do our very best but to do even more than that to succeed. We are learning too what Bertrand Russell called "The Philosophy of Logical Analysis". Our brains feel like muscles being trained as slowly—slowly, they begin to understand and make the right movements.

What are we then? To take a handful of people I know who are trying to get into a French boy and an English girl with a slow smile who spent the summer working as a barmaid. Our parents will probably be able to say for our three years of academic life and we will benefit greatly and work in the local shops or else visit India in the vacations.

I am worried however because of one definition of an intellectual as "a person without a craft". Again, if you ask people why they are applying for Oxford or Cambridge, some will say "Daddy did it" or "the buildings are so beautiful". Well Daddy must have been pretty intelligent in the first place to have been able to set up the precedent. I think that we lack some sense of drive and above all a clear view of what we are trying to do and an awareness of our luck.

Last week I went to register for my evening classes; as I was filling in my form, I heard the man in charge say to a boy that's all right, just put in a name for your school. "I haven't got a school," said the boy, "I'm on social security."

Yours sincerely,
DIANA PHILPOT.
The writer is an 18-year-old pupil at the Fircroft Lyceum in London who hopes to read psychology at university in 1976.

I have great respect. Never the less, as the editor of one of the books mentioned, I object to his inaccurate handling of the series of which my editor is one; to his mis-spelling of my name; and to the specious device of constructing one sentence from three in my introduction, and then reproaching me for the clumsiness that he created.

As a medievalist I relate the rooms might well be found in the curriculum at Ordinary/CSB level where archaeology could be seen as part of a general education, and it is also studied in some schools as part of a sixth-form general studies course, but if the suggestion is that it be taken increasingly at A-level as a useful prerequisite for a degree in archaeology, then we must ask what, in a particular pupil's course, it would replace.

Current A-level syllabuses are so full that only three or four subjects can realistically be studied, and indeed no university expects more from its applicants. Although as an amateur archaeologist I have often been tempted to plead that archaeology be taught more widely

in schools, yet as a schoolmaster I have felt unhappy lest it edge out other subjects which in fact so often provide either a vital tool or an essential basis for its further study.

I would have thought that the universities might prefer to keep the detailed study of archaeology to themselves, while at the same time keeping in touch with schools (as indeed so many do) in order to encourage pupils to attend courses and to learn the rudiments of excavation.

Finally may I suggest more university courses of the Bradford archaeological sciences variety; this indeed so many have a definite bias to some science sixth formers and I imagine it provides a useful service to archaeology.

Yours faithfully,
J. P. TOOMEY,
Deputy Headmaster,
North Bromsgrove High School,
Worcestershire.

more letters page 16

Science numbers

from Mr R. A. Barnett

Sir—Your two articles (*THES* September 26) headed "Science revival boosts admissions" and "Technology students drop 110,000 in seven years" seem somewhat at odds and require further exploration.

You quote a statistician from the Department of Education and Science, warning against over-optimism in any apparent slackening of the move away from science: "The numbers taking science subjects in the first year of the sixth forms show no sign of recovery." This seems to perpetuate Dalton's warnings of the swing away from science. But, in fact, if one looks at the numbers themselves, it will be seen that the figures show an upturn in numbers taking science subjects in the first year of the sixth forms.

This turnaround began immediately after Dalton, in contradiction to his projections and has gone on ever since (*DES Statistics of Education* Vol 1, Schools). It is true that as a percentage of the sixth form population the group has still falling but compared to the plummeting drop Dalton was concerned with the current trend is negligible—it has almost flattened.

It also should be borne in mind that a further population of sixth formers taking science subjects is found in those taking both science and non-science subjects. In the decade since 1964 this group has tripled and continues to rise at one per cent per year. It now accounts for 20 per cent of the sixth form population.

The growth in this group is arguably the most significant feature for higher education. There would seem to be a large latent constituency of students taking science subjects within higher education, albeit in a hybrid multi-disciplinary course. Such students may well be effectively disenfranchised from reading science by admissions requirements designed for the pure arts or science sixth formers.

Lastly, the second article admits that "the reduction is almost entirely in terms of part-time students." This is consistent with the present fall-off in all part-time work in polytechnics (*THES*, May 23). To this should be added the fact that science students in universities already constitute about 55 per cent of the undergraduate population and is currently rising (*Statistics of Education*, Vol 6).

It would not be surprising if many of those who would formerly have taken part-time courses had been diverted to the full-time courses of the proliferation of full-time courses in the polytechnics over a whole range of subjects.

In conclusion, the "revival in science" should not surprise us. The potential candidates were always there and so were the structures. The swing away from science is relative to the exaggerated expectations engendered by the scientific revival of the early 1960's.

Yours faithfully,
R. A. BARNETT,
Administrative assistant (admissions),
Polytechnic of North London.

Archaeology in schools

from Mr J. P. Toomey

Sir—I was interested to read your report (*THES* October 3) of the Cambridge conference on the place of archaeology in British education. As far as schools are concerned, rooms might well be found in the curriculum at Ordinary/CSB level where archaeology could be seen as part of a general education, and it is also studied in some schools as part of a sixth-form general studies course, but if the suggestion is that it be taken increasingly at A-level as a useful prerequisite for a degree in archaeology, then we must ask what, in a particular pupil's course, it would replace.

Current A-level syllabuses are so full that only three or four subjects can realistically be studied, and indeed no university expects more from its applicants. Although as an amateur archaeologist I have often been tempted to plead that archaeology be taught more widely

from Mr Allan Sensitive
Sir—The Standing Conference on Schools Science and Technology, the Schools Technology Forum and the Science and Technology Regional Organisations are among the organisations which are in the thick of the battle against the prevalent attitudes of low status, disinterest and indifference towards science and technology.

It was with pleasure that I read the article "Science Revival Boosts Admissions." This suggests that the disrepair of these areas of work is being overcome, even in the present gloomy industrial and economic climate. As a director of one of the Science and Technology Regional Organisations I would hope that our efforts, and the efforts of like organisations, have made some contribution to this regeneration of interest.

However, it should be realised that there is still much to be done and that the target figures of undergraduate entry, if reached by the universities and polytechnics, are not necessarily as high as the figures they would like to see on their courses. Target figures are sometimes those which make a course viable, whereas, in the light of the country's sixth form population, the maximum capacity on courses as it is true to say that there are a considerable number of vacancies around, despite the encouraging increase in numbers.

Furthermore the entry qualifications on science and technology courses generally are much lower than in other fields, which indicates that science and technology are not going to receive their fair share of the urgently required, high-calibre, young people.

A further article, in the same issue of *The THES*, refers to the same topic: "Technology students drop 110,000 in seven years." It gives a truer picture of the seriousness of the situation because it provides information regarding the run-down in terms of the demands of young people for courses of this kind and indicates that a boost in admissions needs to be very considerable in order to meet today's industrial requirements.

Although the article only refers to colleges outside the university sector, much the same is true of the universities. Furthermore, the article goes on to comment: "On the whole, science has not over the next few years the drift away from science and technology will continue, although, perhaps at a diminishing rate. If numbers do increase it will most probably be due to a recovery in numbers going into further education as a whole, since this is more volatile than subject patterns."

The superficial contradiction between these two articles is obvious, and it is encouraging that *The THES* should report on the welcome boost in admissions to undergraduate science and technology courses but suggest that another article should suggest the opposite. However, it is necessary to look at this, in perspective, in terms of the requirements of industry and the need for expert scientists and technologists in order to halt the decline in our technological efficiency and expertise as compared with our European neighbours.

Yours faithfully,
ALLAN SENSITIVE,
Director,
Tayside Schools Technology Centre.

in schools, yet as a schoolmaster I have felt unhappy lest it edge out other subjects which in fact so often provide either a vital tool or an essential basis for its further study. I would have thought that the universities might prefer to keep the detailed study of archaeology to themselves, while at the same time keeping in touch with schools (as indeed so many do) in order to encourage pupils to attend courses and to learn the rudiments of excavation.

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Yours faithfully,
J. P. TOOMEY,
Deputy Headmaster,
North Bromsgrove High School,
Worcestershire.

The voice of the educational backlash

Peter Scott discusses the significance of the political and educational views of Dr Rhodes Boyson

With his mutton-chop side whiskers and his watch stuffed confidently into his waistcoat pocket, Dr Rhodes Boyson, comprehensive school headmaster turned Tory backbench member of Parliament, enthusiast for traditional standards and hammer of leftist progressives in education, seems a Victorian born out of his time.

This impression goes beneath the superficial. He speaks in the confident accents of Lancashire, which for 80 years from the repeal of the Corn Laws to the Great Depression was a heartland of that other England, the north, and which if it could not challenge could at least occasionally ignore the dulling primacy of London.

Dr Boyson learnt his economics from Adam Smith not from Maynard Keynes, his social philosophy from the New Poor Law of 1834 not from the Beveridge report, his view of how society works from Thomas Malthus, Jeremy Bentham, and perhaps Samuel Smiles not from Karl Marx, William Morris, and the Webbs, and his politics—well, here there is a difficulty because both his grandfather and father were members of the ILP while Dr Boyson is a vociferously ennobled Conservative MP for Bront North.

Yet he is not an anachronism. At the Conservative Party conference in Blackpool in his native Lancashire earlier this month, his speech in the education debate was among the most impressive of the week—judged by the standards of political rhetoric.

The rank and file showed by their assiduous applause that he was their favourite. Indeed his reception appeared to overshadow that of the more illustrious and more aristocratic front-bench spokesman on education, Mr Norman St-John Stevas.

Nor does Dr Boyson's relevance rest only in his ability to appeal

to the political emotions of Tory backwoodsmen. The Conservative Party like its Labour rival is a heterogeneous coalition of aristocrats like Lord Home and those who have adopted aristocratic habits of right-wing intellectuals like Sir Keith Joseph, of businessmen like Peter Walker (who incidentally are usually the most liberal), and finally of populists or Tory democrats of whom Dr Boyson is less than two years away. The House of Commons has established himself as a prominent and articulate leader.

All parts of the Conservative Party, with the possible exception of the aristocratic element, have become unhappy or at any rate uneasy about continued allegiance to Butskellism, that mish-mash of Keynesian economics and Beveridge social policy that has served as the dominant political philosophy in Britain for the last generation.

However they are unhappy for different reasons. The businessmen continue to support the two grand principles of full employment and the welfare state but fear that the economic and tax policies necessary to sustain them are undermining the profitability of wealth-generating private enterprise (a view with which some right-wing members of the Labour Party have considerable sympathy).

The right-wing intellectuals attack Butskellism with excessively theoretical and perhaps arid arguments—which is not difficult as this progressive consensus never enjoyed much theoretical credibility as an economic or social model.

Tory democrats like Dr Boyson attack this consensus because they believe that the concern for communal improvement has undermined the self-reliance and eroded the sense of individual responsibility in the citizen.

They favour the market as a distributive mechanism, not like Sir Keith for what appears to be almost metaphysical reasons, but because it seems to allow ordinary people greater control over the organization of their daily lives. To Sir Keith the market is an economic mechanism; to Dr Boyson it is a political and even a moral instrument.

Dr Boyson is the Jeremiah of modern education, although he has managed to remain almost ebulliently cheerful. As a former headmaster and the present vice-chair-

man of the Conservative back-bench education committee, he does, of course, have a proprietorial interest in education as a political issue.

No television discussion in education is complete without the whiskered face of Dr Boyson, and every week he speaks at several meetings of parents protesting against the imposition of comprehensive schools or the slippage of educational standards. Last Monday a new book by Dr Boyson, *The Crisis in Education*, was published with appropriate media fanfares.

However his commitment to education as a political issue cannot simply be explained by this proprietorial interest. His priority fits in well with his emerging philosophy of Tory democracy, because Dr Boyson sees education policy as the first battlefield between the platonic guardian of the left and ordinary people who remain attached to traditional values of hard work, self-help, and individual choice (and responsibility).

So his book must be judged by two standards: as a serious contribution to discussion of educational problems, and as a polemic in the tradition of Tory populism.

Many of his comments are prejudiced and banal. On possible suppression of free speech within universities: "many of our 250,000 university students could find themselves attending indoctrinating sessions instead of learned lectures".

On truants: "a new sub-cultural class, worthy of the pen of Charles Dickens". On relevance in courses in higher education: "instant slogans, instant hedonism and instant dogma, instant scholarship and objective detachment".

Dr Boyson's solutions to these woes are similarly abrupt. Vouchers should be introduced which parents could use to "buy" an education in any school they liked, thus asserting a consumer's choice in education, with no hint of the immense practical difficulties that such a change would encounter even if the principle was generally accepted.

Some universities and colleges should be closed, again with no apparent thought of the grotesque waste of former public investment in buildings for these institutions and no suggestions for alternative use.

Apart from his off-the-cuff suggestions that the number of universities may have to be reduced, Dr Boyson makes four suggestions for

higher education. First, loans should replace grants for students because allowing students "a free ride is a spectacle of their motivation".

Second, there should be a gap between school and university to allow students to "find their feet" (a phrase which is a threat to academic standards and freedom (there are good arguments for loans but that is not one of them)).

Third, staff and students should have to sign some kind of pledge of good behaviour or "loyalty oath" before being admitted, and fourthly, membership of student unions should be made voluntary.

There is something to be said for all these suggestions, with the exception of the third, but few people concerned with the future of higher education would place these four points at the top of a list of the most urgent priorities. That Dr Boyson does so is sufficient comment on the value of his contribution.

However as a polemic *The Crisis in Education* is much more significant. Britain has escaped the welfare backlash that was felt in parts of America in the late 1960s, but perhaps there is a parallel phenomenon in education.

The force of Dr Boyson's case is that there is a considerable concern among parents about what is happening in schools (and in the community at large about what happened in parts of higher education). They disliked the divisiveness of the 11-plus and the rigidity of examinations in the past but they have not been convinced that the unstreamed comprehensive school and teacher assessment were the right answer.

Dr Boyson and the other Black Pamphleters, aided, of course, by the press, have skillfully used these undercurrents of discontent as much as of discontent. Supporters of recent educational reforms, on the other hand, have neglected this task of popular persuasion and sometimes confused the issue by bewilderment with statisticians.

The best chapter in the book is that in which Dr Boyson attempts to describe the decline in general cultural standards and personal participation. To do so, he returns, appropriately, to the Rosendale valley in the Lancashire of the 1850s.

He describes the intense personal



Dr Rhodes Boyson, M.P.

interest in politics, the proliferation of friendly and cooperative societies, and the great popularity of concern brass bands, and so on.

He compares this idyll with the poverty, the unemployment, and the ill-health that followed the war with our atomized society in which we live private rather than public lives, controlled by benign but anonymous authorities who use fighting and agitation that you're certainly come to the right place—the words with which the *Students' Handbook*, published at public expense, greeted the new intake of 2,000 adolescents this term, will not soon be forgotten, especially by working-class parents wondering whether or not to encourage their children to seek higher education.

The aggro-fascists of the National Union of Students have inflicted immense damage on the concept of the university in the minds of ordinary people (especially back-bench members of Parliament who vote the money). The worst cases were Essex, Warwick and Lancaster; but what makes the PNL affair special and instructive is that it was a cynical, professional job right from the start.

The two men who organized it, Terry Povey and Mike Hill, both international Socialists, are expert college-smashers, who have been on the job for a long time.

PNL of course was an ill-judged amalgamation between an industrious and peaceful institution, and one where 18 members had been effectively in charge for some time. Indeed, they began to organize the assault on PNL even before it opened in 1971, Hill

smugly predicting "the most serious disturbances the country has yet seen at a polytechnic".

Few people, even in universities, are aware that there is now an extensive literature on how to destroy places of higher education, and the tradition of free speech there.

The NUS publishes a handbook on disruption and it is, for instance, its official policy since April, 1974, "to take whatever measures are necessary, including the disruption of meetings, in order to prevent any members of staff or faculty from organizing from speaking in colleges"; only with difficulty was it dissuaded from publishing a list of banned books, on the lines of the index run by the Old Roman Inquisition.

The Penguin *Student Power*, edited by Robin Blackburn and Alexander Leighton, burns, but the object of student activism openly: "to turn the tables on the system by using the universities and colleges as base areas from which to undermine key institutions of the social order."

No advanced capitalist state can afford to maintain a permanent police occupation of all colleges and universities nor can it act like a Latin-American military thug and simply close down the universities, which after all are necessary in the long run to the productive process. So long as the universities and colleges provide some sort of space which cannot be permanently policed, they can become red bases of revolutionary agitation and preparation.

The same volume provides a practical blueprint: "Campaigning on the Campus" written by Carl Davidson. The activists he advises should first capture the internal media, including all meetings; then they should hold lectures, seminars, and demonstrations; and finally they should be taken over for political purposes.

Next, they should begin "encroaching control by gradually taking over the decision-making and the number of decisions made; and staff appointments; they should persuade the teaching staff not to support the administration, or at least to remain neutral when it is attacked."

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The destructive pressure of 'an incantation of deceiving spirits'

Paul Johnson discusses recent attacks on academic integrity from the student left and its supporters

In the final section of his *Leviathan*, Thomas Hobbes has some trenchant and apt observations on higher education, concluding: "For seeing the universities are the fountains of civil and moral doctrine, from whence the preachers and the gentry, drawing such water as they find, use to sprinkle the same upon the people, there ought certainly to be great care taken to have in them, both from the venom of heathen politicians, and from the incantation of deceiving spirits."

Whoever depraves our universities, poisons the wells of truth, and so sooner or later assaults the health of society as a whole. Hobbes was right to see them as the key. We have already dealt with the threat to them posed by those he calls "heathen politicians": we now turn to the frontal attack on academic integrity mounted by the "deceiving spirits" of the student fascist left.

The horrific goings-on at the Polytechnic of North London are now becoming widely known. If you get a kick out of street-fighting and agitation then you're certainly come to the right place—the words with which the *Students' Handbook*, published at public expense, greeted the new intake of 2,000 adolescents this term, will not soon be forgotten, especially by working-class parents wondering whether or not to encourage their children to seek higher education.

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It is significant that the wreckers have, on

the whole, left Oxbridge alone, despite the fact that in their eyes it is the hard core of academic reaction. Instead, they aim at "first targets, institutions which are relatively newly established, and of low status, especially polytechnics and new universities."

Such places, in any case, have a much higher proportion of students on governing bodies, and even on academic boards, than most universities (which strictly forbid student-representatives being present when staff appointments, curricula and examinations are discussed).

Not that Povey and Hill were anxious to do anything so democratic as to get their policies adopted at the PNL by majority vote. On the contrary, whenever they found themselves outvoted at a governors' meeting or an academic board, they simply summoned their 50-strong renamob, kept handily waiting outside, and took over by force.

The object of this kind of student activism is not merely to obtain physical control of a college but also to change the kind of "knowledge" taught in the "factory". Of course it is perfectly true that the content of higher education is to some extent subjectively determined. Hence the old Balliol jingle:

My name, Sir, is Benjamin Jowett.
If it's knowledge, then I know it.
I'm the Master of this College.

What I don't know, isn't knowledge.
But the traditional subjectivism was that of the academic collectivity, and it was under constant scrutiny and debate; it was also politically and socially neutral. What might be termed the "aggressively neutral theory of knowledge" is rather different.

As one student leader at Essex put it: "Reaction is an ideological weapon with which bourgeois academics are especially well armed"—and thus to be avoided. Or, as a student at Kent observed: "There is no one truth in which the university can educate us. We have to find our own version of the truth, for ourselves, and what may be true for one person may well be untrue for another."

Such a view, of course, makes the university itself superfluous, and indeed, once it has been taken over, it has only a small role to play in the future plans of the fascist left. For the moment, however, attention is focused on transforming what it teaches.

Steven Rose, professor of biology in the Open University, writes: "Scientists must understand and struggle against the undemocratic nature of science as an institution of hierarchy—all power to the professors; its elitism—all power to the experts; its sexism—all power to the men; and its racism—all power to Western modes of thought."

Another prime object is to destroy any examination system based on "conventional knowledge" as outlined in *Contemporary Education* (1971), edited by Michael F. D. Young, notes: "One can ... see ... research possibilities ... which might ... the process of negotiation between examiners and students about what counts as a sound answer."

It is notable that the last two people I have quoted are themselves academics, and it is a chastening fact that the activists are steadily recruiting donnish supporters—one unpleasant feature of the PNL affair is the number of staff, some quite senior, who back student direct action tactics. Some don't express their sympathy simply by making it difficult to impose any control over disruptive elements.

John Griffith, the very civilized professor of public law at London School of Economics, and chairman of a group which campaigns for greater academic freedom writes: "I am doubtful whether any useful purpose is served by having a college-based disciplinary system of any kind ... a disciplinary code within colleges is a natural concomitant of absurd hierarchy and authoritarian structures which colleges operate."

This is merely well-meaning nonsense. The real aggro-dons are less naive, or innocent. They see the campus as a political power-area.

One reason why the militants wish to smash the exam system is to forward their own agenda to the number of donish supporters. For if the curriculum can be politicized, the extremists will grab the first-class honours and, in turn, the appointments (helped, of course, by student representatives on the academic board).

Some sociology students at the PNL admit frankly that their aim is "to create a Marxist cell"; that, they say, is "what they have come to college for."

Of course, most student activists belong to Marxist sub-groups like IS, but one should not underestimate the organizational thrust of the Communist Party itself. It sees the campus, along with the trade unions, as a much more



Robin Blackburn and Terry Povey: prominent personalities of the student left.



Shirley Williams and Margaret Thatcher, both former ministers responsible for higher education. The road to student revolution is paved with the good intentions of conservative-minded people anxious to be trendy.

politically-rewarding area than Parliament. The CP has a student officer, Jon Bloomfield, who organizes an annual week of courses on Marxist studies. This year's, held in July at the London University Students' Union, attracted no less than 730 students (at £5 a head), who heard lectures from senior dons such as Professor Brian Simon of Leicester, Professor Rodney Hilton of Birmingham and Professor V. L. Allen of Leeds.

One of its objects was to extend Marxist perspectives and disciplines to such subjects as art, design, literature and architecture, in addition to the traditional economics and politics. And the course, needless to say, included "revolutionary strategy and tactics."

Naturally, militantly political dons, who bring their views blatantly into their teaching, represent a serious threat to the university ideal. But they are not, as yet, either numerous or well organized enough to topple our system of higher education unaided. The real danger, as events at the PNL (and elsewhere) have shown, is the indifference or cowardice of very large numbers of academics.

It is not always fair to blame them: one of the central tactics of the fascist left is to mount campaigns of virulent personal abuse, in letters, student magazines, posters and so forth, against any member of the staff who offers them the slightest opposition.

In nearly every case the accusations they hurl are complete fabrications; but, as with the Goebels' "big lie", they are often believed, and a distinguished academic can have his reputation permanently besmirched in consequence.

Thus Walter Adams had the last years of his life completely poisoned by the LSE activists; and Terence Miller, who has put up a noble fight against the PNL skinheads, is in similar danger. Such men as Miller, whatever the personal cost, are distressingly rare in British academia.

There are also many in higher education and in politics who drift with what they imagine to be the "progressive" tide simply because they do not wish to be classified—however mistakenly—as "anti-student."

Of course this was essentially a phenomenon of the sixties and early seventies and is much less common today; but in its time it did a good deal of structural damage, some of which, I feel, cannot easily be put right. What made the attack on the PNL comparatively simple was, first, the large student representation on boards and committees, and second the huge sums of public money they had: their "disposal" through the students' union.

Who, one might ask, made such things possible? The answer is surprising. It was the work of politicians usually referred to as moderates: Mr. Owen right-wing. It was Shirley Williams, then minister in charge of higher education, who was responsible for the high percentage of students on the governing bodies of polytechnics.

As John Pratt and Cyril Burgess say in

Polytechnics: A Report: "Under her influence local authorities had to revise and revise their submissions, especially the parts about students, which had to become more and more liberal as the minutes passed."

Another influential pro-student figure was the supposedly authoritarian Edward Short, a convert to the late-sixties fallacy that strict discipline is the chief cause of revolt. In 1968 he told a Commons committee investigating student unrest that the worst-hit colleges were always those "where the rules were excessive and students had not shared in making them."

Short and Mrs Williams allowed student representatives direct access to them, something normally denied to mere vice-chancellors. Indeed, on one occasion Mrs Williams entered into negotiations with the students of a polytechnic without even informing the local authority concerned, who only learnt of the meeting from the glowing students themselves.

As for the public money lavished on the student unions to finance their disruption, it was discovered in the winter of 1970-71 that local education authorities were acting illegally in providing it. The minister who generously stepped in to change the wording of the regulations, and so allow the L.E.A.s to hand over the cash, was none other than Mrs Thatcher! The road to student revolution is paved with the good intentions of conservative-minded people anxious to be trendy.

Indeed, it is a curious fact that, by and large, the one group which has collectively stood up to student nonsense has been the non-academic staff—that is, the cleaners, caretakers, maintenance men, and so forth, the only working-class element in higher education and, in theory, the people whose cause the student militants claim to uphold.

At the PNL, the first and so far the only serious defeat inflicted on the International Socialists was on October 15, 1973, when the exasperated sons of toil forced the student union to call off one of its endless "occupations".

The student left is fully aware of this embarrassing weakness in their strategy and that is why the NUS, after a series of secret meetings, has drawn up a mutual offensive and defensive pact with the National Union of Public Employees, which includes most of the campus manual workers.

This is a significant and in its own way a rather sinister development, for clearly student wreckers, acting in concert with non-academic staff, could bring almost any college to a standstill.

Nevertheless, it remains true that the academics, provided they stand together and stick to the moral and professional principles of their trade, have nothing to fear from any of the university's enemies, whether "heathen politicians" or "deceiving spirits". What they need, however, is encouragement and guidance on a policy of common action, and this I will attempt to outline next week.

The third of our articles in "The University and its Enemies" Next week: "Defending Culture in Danger."

Getting the message through to the coal face

In 1954, the National Union of Mineworkers (Yorkshire Area) and the North-Eastern Division of the National Coal Board agreed to sponsor a three-year day-release course for coalminers at Sheffield University department of extramural studies. Now, 20 years on, the course has become established as a major educational influence among the coalminers of Yorkshire.

Many of the students attending the Sheffield day-release course were coalface workers, the heavy manual workers of the coal industry. In educational terms these men might be thought to represent the least promising material, having left school at 14 or 15 years of age, but the day-release achievement of these day-release students provides an unquestionable challenge to any such assumption.

In an industry with a strong tradition of trade unionism, the National Union of Mineworkers provides the most ready outlet for creative energies. The competition for union

office at branch level is strong. Biennial elections held by pie-heat ballot have a regular participation of more than 70 per cent, and in this field the Sheffield day-release students have had quite remarkable success.

Out of the total of 126 miners who responded to a survey that has been carried out by the university, no less than 52 (41 per cent) were involved in trade union work. Of this group, 17 ex-students (13.5 per cent) were active in the trade union when selected for day-release, and retained the same branch position after the course.

A further group of 16 students (12.5 per cent) moved to higher branch office such as president, delegate or secretary, and 18 students (14 per cent) who were not active in union affairs when selected for day-release became active later, many being elected to the higher offices of the branch without previously having served at a lower level.

James MacFarlane discusses the success of a day-release course for Yorkshire miners

One student in this category has the remarkable achievement of becoming a branch secretary at three different colleges, in the first one and then the second, pit closed down.

No claim could be made that the Sheffield day-release course was entirely responsible for the high level of trade union commitment demonstrated in these figures, and no doubt many day-release applicants were already motivated towards trade union involvement.

Many of the students, however, in their reply to the survey, gave credit to the course for awakening their interest in making "their own decisions" at their trade. One student wrote:

"I thought you would be interested to know that the recent ballot at the pit resulted in me being elected delegate. No doubt attending the day-release course contributed a great deal to my success. I would be obliged if you would convey to all concerned in the department of extramural studies my thanks and appreciation for providing the opportunity for further education."

Not all the comment from ex-students was uncritical, and in a few cases the day-release course had raised expectations and caused frustration when those expectations were not realized.

One respondent had obviously tried hard to serve his local community but had finally given up the attempt and turned to self-employment.

"Prior to my attendance at the day-release I was a contented man satisfied with his job. Since, I have been tormented with trying to do my small contribution towards the union and the Labour Party to such a degree that last May I served my notice on the NCB ... perhaps with self-employment I can settle down."

Another critical comment came from an ex-day-release student with a very different viewpoint: "The Sheffield course is basically a good one with the majority of students using their skills to assist the NUM and the working class. However, in so far as the course provides the first ladder into the middle-class via the full-time educational system, I disagree with it."

The "ladder" mentioned has been used by 22 of the students who replied to the survey. Those students went on to further full-time education at university or at the adult colleges such as Pirbright, Harlech, Ruskin, and the Co-op College at Loughborough.

Five of these students returned to work in the coal industry. Others have taken up a variety of jobs, three have gained degree qualifications in the social sciences and five are still at university.

Coal-industry management has also gained from the flow of day-release students, and staff jobs in the National Coal Board have provided a further outlet. Sixteen ex-students have taken advantage of an industrial relations officers' method study engineers and necessary managers for personnel at colliery level.

A further measure of the continued commitment and community involvement of day-release students is demonstrated by the numbers active in local government. Thirty-four ex-students (27 per cent) were active on parish, rural or urban district councils; and out of this

number twenty-three became active after day-release.

The evidence does not and could not provide any clear guide to the influence of day-release in the motivation of students towards active involvement in local government, but given a high level of involvement, an adult education background could at least be said to lend itself to more informed local government.

The Sheffield University NUM/NCB day-release scheme covers only a relatively small group of workers and the educational return on the small amount invested in such measures of the waste of human resources amongst industrial workers who have no such opportunity of continuing education.

In a working life of fifty years in industry, a few days' absence to attend university is only small reward and a very modest experience. If, after 20 years' experience, the National Coal Board and the National Union of Mineworkers continue to give full support to the Sheffield course (at the cost of some £30,000 a year) it is worth evidence of the value which they place on the educational progress made for their workers.

Is it too much to hope that a Labour Government will follow this example by implementing the extended provisions envisaged in the Russell Report and meeting the needs of the day-release Union Colleges? (*The Times* 29th August, 1975) for an extension of trade union education?

After all, a member of the Government, the Secretary of State for Industry, was the product of a similar course undertaken by Sheffield University. For Derbyshire coalminers. Who knows, there may be more Cabinet Ministers waiting discovery.

The author is lecturer in industrial field at the University of Sheffield.



New York unveils 20% cutback package

from Thomas Cahill

NEW YORK Dr Robert Kibbee, chancellor of the City University of New York, has now formulated a series of proposals for reducing the scope of the university by 20 per cent and for lessening its dependence on revenues from the financially troubled city (THES, October 24).

Dr Kibbee has been under pressure from Mr Ewald Nyquist, the New York State Education Commissioner, to avert impending financial disaster by abandoning the university's tradition of free education in a city that has always had far more than its share of immigrant and migrant poor.

Pressure has also come from the fact that the university's budget has been cut repeatedly by the city in efforts to save itself from default. Mayor Abner H. Beame has recently slashed the university's annual budget for the third time this year, and the cut is estimated as being between \$2m and \$4m.

This means that, since the mayor established his supposedly rock-bottom "austerity budget" of \$665m for the university last December, he has gone on to cut it down by something close to \$140m. Nor can there be any assurance that the last cut has been made.

More than this, each fresh cut means that additional sums are lost from the state under a scheme of matching grants. Thus, when the mayor last month cut an additional \$32m in city funds from the university's budget, the university actually lost \$54m because it became automatically ineligible for certain state grants.

The task of reducing university services in order to conform to reduced income is made doubly difficult by the huge and multiplying of the City University—20 separate institutions serving 275,000 students—and by the political repercussions attendant on the more obvious ways of reducing services.

To put an end, for example, to "open admissions"—the practice begun in 1969, of opening the university to all city high school graduates regardless of their academic records—would bring charges of racism and stiff opposition from New York's minority groups. To institute tuition charges would be to abrogate an essential ingredient in New York City's identity—its free access to higher education for the poor.

Dr Kibbee, revealing his new plan at a meeting of university administrators, said that the university's financial health had been dealt a series of "devastating blows".

Inquiry into colleges' future 'should omit educationists'

A national commission, whose membership would include no educators or officials in charge of regulating education, should be appointed by President Ford to determine how and where American higher education should retreat in the face of its present economic crisis, according to Melvin A. Eggers, chancellor of Syracuse University.

Mr Eggers, speaking in Washington at the annual meeting of the American Council on Education, said that present trends in the financing of higher education and in the age distribution of the population amounted to a "time bomb ticking away".

"We cannot even call attention to the ticking, either because we fear we will cause panic or be subject to ridicule," he said.

Mr Eggers said the academic community appeared to lack "reliable, objective judgment on how the higher-education complex can adjust to new conditions with minimum damage. The judgments needed are those made by people who are very astute but who are not directly involved in the outcome."

Thus, he said, a "National Commission on Higher Education" should concentrate on "striking rather than developing the higher education complex."

Axe for more PhD courses

Evaluation of doctoral programmes in public and private universities by the New York State Education Department has moved into its second phase. The avowed purpose of this second project, by a State body is to eliminate ineffective programmes and to cut back on the number of doctorates produced. The chemistry programmes at Yeshiva and Adelphi universities and the chemistry and history programmes at St John's University, for example, are being closed with no new students being admitted.

Assessment has been completed in the fields of English, astronomy and physics, and conclusions will be announced shortly. Review of foreign language programmes has begun.

Academics are worried about the consequences of an unfavourable evaluation on the employment prospects of redundant faculty. They view as inaccurate and misleading the public statement by New York State officials that the programme of evaluation was initiated four years ago by leaders in doctoral education who feared the oversupply of programmes in most disciplines would lead to enrolment shifts to weaker programmes because they were easier.

At the time, the proposals will require the approval of the Board of Higher Education, except the last which will require the passage of a new law by the State legislature.

At present, due to the matching grants system, the State pays \$1,710 for each City University (CUNY) student that it does for students in the State University system (SUNY). Dr Kibbee would have the State allocate a certain amount for each CUNY student, independent of what the city might pay, and thus increase its overall CUNY contribution from \$290m to \$335m annually.

According to Dr Kibbee, the reduction in admissions would not compromise the principle of "open admissions". All city high school students would continue to be accepted—no longer as they applied by March 1 of their senior year.

The workload of the remaining faculty would be increased by up to 20 per cent, and their salaries would be increased by 10 per cent. Institutions have already been cut from 278 to 208, and additional cuts of 15 per cent are scheduled for February.

The CUNY faculty, whose ranks include some of the country's top scholars, and whose salaries are among the highest in their profession, are not receptive to Dr Kibbee's proposals. He has been accused by the Professional Staff Congress, the faculty's union, of attempting to reduce instruction at the City University of New York to grade-school levels.

Dr Kibbee, revealing his new plan at a meeting of university administrators, said that the university's financial health had been dealt a series of "devastating blows".

Dons' union warns of fresh attacks on tenure

from Henry Wasser

NEW YORK The New York State Conference of the American Association of University Professors (AAUP) has reflected the growing concern of faculty with what they see as the subversion of academic tenure by administrative authority during a recent meeting. It noted two major devices used by administrators on governing boards.

Faculty governance at most universities has explicitly included responsibility for curriculum. University officials are currently eliminating programmes without formal consultation or vote of faculty in order to cut back the number of tenured professors. Tenure has no meaning when a discipline is removed in whole or specialized part from a university's offerings.

Another tactic is to modify structures so as to remove entire departments or merge smaller with larger ones. This move is being attempted without reference to legally designated faculty committees.

University authorities are also currently engaged in studies of early retirement. Faculty have, however, no efforts to reduce the mandatory retirement age, ranging from 65 in Columbia University to 70 at City University of New York.

Conference delegates were at a loss as to how to combat these strategies. They will be looking to the courts for judgment of violations of contract and by-laws; and hoping for more decisive influence with state and national legislatures. But in the immediate climate of public distrust of higher education and the disastrous state of public and private university finances, faculty are pessimistic about their ability to withstand these trustee and administrative actions.

Lit. crit. school

A national school of literary criticism, financed with a grant from the National Endowment for the Humanities, is to be established on the campus of the University of California at Irvine.

Chronicle of Higher Education.

Columbia sells \$5m of land to stave off crisis

from our correspondent

NEW YORK Columbia University is putting \$5m of its property up for sale in an effort to improve its declining financial position. Columbia will also cease to fill certain administrative posts as they become vacant, and is currently considering more drastic remedies for future years.

The university faces a budget deficit of \$4m this year and much larger deficits in the years to come, due to the virtual exhaustion of its endowment funds. The deficit, which began in 1967, are largely the result of inflation and increased fuel costs.

The news comes as a shock to the American academic community which had expected the well-endowed institutions of the Ivy League to remain essentially untouched by the financial difficulties that have recently been plaguing other private, as well as public, institutions.

But, according to Dr William McGill, Columbia's president, most Ivy League schools and other large research institutions—such as the universities of Chicago, Stanford, Berkeley and Michigan—are faced with the same problem as Columbia.

Dr McGill, who has just been elected chairman of the American Council on Education, a nationwide body of 1,500 colleges and universities, accused the Federal Government of being responsible for the financial plight of higher education.

Throughout the 1950s and 1960s, he said, colleges and universities were encouraged by the Government to expand dramatically and to create many new programmes in order to meet the demand for higher education. Now, however, the administration had become fond of accusing the colleges of fiscal irresponsibility.

"It is a bit irritating to me to be lectured on management economy in 1975 after having been lectured for two decades on the fact that the university was not doing enough," he said.

Columbia nevertheless intends to attempt a significant restructuring of its academic organisation in order to save money. But Dr McGill warned that "the restructuring of Columbia is not going to solve our problems unless inflation is solved".

The property being offered for sale includes real estate adjacent to the new Morningside Heights campus and the Delafield estate in Riverdale.

Simone Weil: polarities

Robert Coles and Dr Conor Cruise O'Brien, former vice-chancellor of the University of Ghana and now Irish Minister of Posts and Telegraphs.

In Dr Marcus's view those working in the humanities have experienced a sense of demoralization and loss of self-confidence and need a centre to serve them in the same way that the Brookhaven National Laboratory serves scientists and the Stanford Centre for Advanced Study in the Behavioural Sciences serves social scientists.

"Increasingly," says Dr Marcus, "the parameters of social change are being set by technology and scientific innovation, while exploration for human action are increasingly being provided in the light of the statistical findings and the behavioural assumptions of the social scientists. In consequence, the social and cultural role of the humanities, and of the humanist, appears once again to be shrinking."

He and his colleagues are also worried about the "intensification of anti-historicism" as Morion W. Bloomfield, professor of English at Harvard and the committee's chairman, calls it. "The deep structure of the human mind is a reflection of history, the unifying factor in human studies."

The centre will be interdisciplinary, will invite 40 to 50 scholars each year as annual fellows, and require an annual budget of about \$1.5m. The universities of Rochester, Pennsylvania, Michigan and Texas are under consideration as sites.

As for the licences "Enseignement" degrees designed specially for future lycée teachers, arrangements should be made between the ministry and the universities governing the academic content of these courses. Final responsibility for how over, should still lie with the central Ministry.

Mr Haby said that he was prepared to abandon the present system of teacher recruitment. The CAPES and the agrégation, which have been the traditional methods of recruiting the élite of the French educational system, would be replaced by a competitive examination after the DEUG, the diploma in general studies which

Enrique Kirberg, who was released last month by the Chilean Junta after two years in prison, has been appointed professor in New York. Columbia University is formerly president of the Technical State University in Santiago, Chile's second largest university.

The graduates schools of arts and sciences of Harvard, Yale and another elite names of applicants from minority groups in an effort to increase the chances of minority students getting into them.

Minority swapping

The graduates schools of arts and sciences of Harvard, Yale and another elite names of applicants from minority groups in an effort to increase the chances of minority students getting into them.

West Germany

Student grants bear brunt of pruning drive

by Günther Kloss

Following the announcement at the end of August of details of the proposed public expenditure cuts for the year 1976 (the THES, September 12) the Federal Government has now formally passed the draft 1976 budget. Total spending for 1976 will be some DM 13,000m (£2,500m) lower than originally envisaged in the Government's four-year programme. Over DM 6,000m of this amount will require Bundestag approval because it concerns expenditure fixed by law.

The impact of these cutbacks on the education sector is considerable. The effect will actually be even greater because all the Länder, which provide the bulk of education expenditure, are also taking similar measures. It has, for example, just been announced that the teaching hospital at the new University of Regensburg in Bavaria will not now be built, and that any further expansion of the new universities of Bonn and Bayreuth, which is due to admit its first batch of students in November, has been halted for the time being.

The Federal Ministry for Research and Technology, which has over the past few years had one of the highest annual growth rates—between 15 and 20 per cent—must in 1976 spend DM 158m or 3.9 per cent less than this year. As a consequence, the level of research expenditure originally envisaged for 1976 will now be reached only in 1978.

The bulk of the Ministry's expenditure is directed towards supporting research in institutions and industry, and the Minister plans to axe some 150 of a total of 3,000 research projects. The cuts have been selective, in line with Government policy which favours applied research and emphasises a close link with industry and the economy in general.

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Row over v-c breaks up university

by Paul Moorman

The 11-year-old three-campus University of Botswana, Lesotho and Swaziland came to an end last week when the Lesotho Government unilaterally declared the Roma campus in Lesotho the new National University of Lesotho.

The move followed bitter disagreements between the Lesotho authorities and UBL's New Zealand vice-chancellor, Dr Cyril Rogers.

Matters came to a head last month when Lesotho threatened to make Dr Rogers a prohibited immigrant unless he renounced the new four-year contract he had signed with the university council.

Dr Rogers switched his headquarters to Swaziland, whereupon Lesotho initiated court proceedings against him for allegedly removing university assets from the country illegally.

Both the council and Dr Rogers decided to fight the action and legislation to set up the new autonomous university was then set in train by the Lesotho Assembly. The Bill passed into law on October 20.

There were 1,200 students and 150 staff, of whom about 60 were British, at the now defunct UBL. Staff at the new university have been told that they can keep their old jobs but that any who wish to leave may do so.

It is believed that the Lesotho Government viewed "dis-

tributed Dr Rogers' frequent trips abroad which, however successful they might have been in attracting foreign aid for UBL, earned him the reputation of being an "absentee vice-chancellor" in some quarters.

Nor was Lesotho pleased with the way in which he handled the devolution of courses in discussions on the university's plan. It was felt that he allowed the other two countries far too many of the plums.

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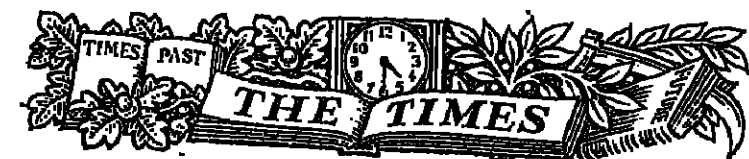
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An echo for excellence

Dr George Steiner, in his eloquent plea to rescue cultural excellence from the claws of the "social levelers" (opposite page) is echoing in his own way both the fears of Dr Rhodes Boyson—that disrespect for the traditional values is leading to educational and political anarchy (page 16)—and the hopes of Archbishop Cooke that the man can rise himself above material gain and work for the common good.

Dr Steiner is careful not to be misled by the illusory phantoms of ideological debate. The tidal wave of mediocrity that he sees threatening academic excellence is not merely to be deplored. It represents, in his eyes, the formula for the economic and cultural suicide of modern man, cutting him off both from the wells of scientific invention on which Britain depends for its economic existence, and from the highest expressions of man's nobility that are to be found in the fearless pursuit of scientific truth.

Yet to claim, as Dr Steiner does, that it is not only legitimate, but also noble, to find "the truth" more interesting than social justice—even though it may contradict it—is to tread a different, and more dangerous path. For it demands an

Diplomas in discrimination

The wide discrepancies in admissions to diploma of higher education courses this year, in spite of big advertising campaigns, are a remarkable demonstration of students' discrimination. It cannot be a coincidence that four of the five most popular courses (excluding the 180 students admitted to Crewe and Alsager College of Higher Education as part of a bachelor of education degree) are at North East London Polytechnic, Bradford College, Gwent College of Higher Education and Wolverhampton Polytechnic.

All these colleges offer distinct programmes with either a wide variety of options or flexible entry requirements, or, in the special case of NELP, a distinct philosophy of independent study. The colleges which failed to attract sufficient numbers of students appear to be hardly distinguishable from conventional degrees or to offer any other attraction to a two-A level entrant.

Portsmouth Polytechnic's diploma, linked to a modular bachelor of science degree, failed to attract a single student. Bournemouth College of Higher Education, in its second year of recruitment, attracted a disappointing total of 14 students. Other entrants may have been deterred by the college's failure, so far, to gain approval for an arts degree course.

All the evidence suggests that

The slow march of microfilm

It is how almost 50 years since microphotography was originated and nearly 300 years since miniature writing was evolved but the traditional forms of publishing have not yet been vanquished. Acceptance of microfilm in the academic community is still proceeding slowly.

It is difficult at present to see clearly whether this slow development is due to a failure in taking account of human factors such as strong resistance to the possible replacement of the printed book by a microfiche or to poor standards in the manufacture of film and the microfilming of texts and the development of reading equipment.

Another aspect which might be responsible for its slow acceptance is the lack of attention that manufacturers themselves have paid to the educational community, which they have considered to be lacking in economic viability. It is perhaps time that they looked again.

The educational community, too, should also clearly revise its opinion and look again at such advantages as space saving, reduction of binding costs, preservation, and

from Mr D. A. Schofield

Sir—I imagine that many members of university academic and administrative staffs who have to deal with individual students and their problems would share my view that the greatest financial difficulties are faced by those students whose grant assessments call for parental contributions to a greater or lesser extent.

Frequently cases arise when parents—for good reasons and had—fail to contribute enough to bring a student's income up to the level of a full grant, and occasionally one comes across cases where parents make no contribution at all because they did not want their son or daughter to go to university in the first place.

The law decrees that a young person is legally adult at 18 years of age and, consequently, that he can decide for himself whether to accept the offer of a grant system, rather than the law of the land, which says that at least of the student's financial support must be provided by his parents.

This paradoxical situation has been defended by governments of both political persuasions, but it really is a nonsense—and a nonsense which causes real hardship for many young people.

LANCASTER LEGALITY

from Professor J. A. Griffith
Sir—Just assembled on the third morning of a hearing, counsel for the university, in response to no question and on no pretext, tells the court he wishes to state, on the authority of the vice-chancellor, that if they find for the students, the university (here I adopt the vice-chancellor's version) reserves its position on whether to institute new proceedings before a different tribunal.

The statement was totally uncalled for, both literally and in the sense of its being improper. It was prejudicial, out of place, and ought never to have been made.

When I accuse the vice-chancellor of saying that he said proceedings would be instituted, I say that he "never said, thought or believed any such thing."

Why, then, did he authorize the making of the statement?

Yours faithfully,
J. A. GRIFFITH,
Professor of Law,
London School of Economics.

Editor's note: Mr Carter said this week: "Professor Griffith's criticism would appear to be more properly directed at counsel's conduct than at the university. This correspondence is now closed."

DR MURRAY

Sir—So, Dr Murray, according to Peter Wilby (THE SUNDAY TIMES, October 24), "ambled along, becoming principal of the third women's college in Cambridge but doing 'little revolutionary or original', and making New Hall a monument to her managerial abilities."

I was one of the first 16 undergraduates at New Hall when it opened in 1954. Eighteen-year-old girls, most of them fresh from school, were suddenly thrust into a line of public life. We met news-reporters, gave television interviews, accepted invitations from the richer undergraduates who thought it fun to invite an entire women's college to sherry, and signed when some Poppy Day letters carried a smug sign outside our front door: "Reading Department."

Looking back on this year, I am amazed to think how little difference it made to the rest of my life. I don't think any of us got drunk on the excitement—although, certainly, we enjoyed it—and the next two years were not the hangover they could so easily have been. For this we have to thank Dr Murray.

The opening of a new women's college, in a Cambridge where the ratio of men to women was 12:1, was revolutionary enough; a principle which even more revolutionary ideas would have been a disaster. The standing influence of someone who, as Dr Murray said, was "not her own convictions, when to encourage, when to tolerate, and when to forbid." This we had, and we had it in New Hall too.

Grants injustice

Whilst the national economy is in its present parlous condition one cannot realistically expect the means test on parents to be abolished, but surely it should not be beyond the wit of man to design a more humane arrangement than the present.

Has, for example, there been any consideration of paying full grants to all undergraduates eligible to receive support from public funds, and then treating the grant as part of the parents' income for tax purposes?

This would surely be a better system than the present ludicrous arrangement of the State—through local education authorities—paying students grants on a sliding scale based on nothing more than the pious hope that parents will voluntarily pay their share of the assessment.

If the organizations representing students had concentrated on this aspect of the grant system, rather than their more headline-seeking efforts related to the level of the maximum grant, then I suspect that there would be rather less real poverty among students than there is today.

Yours faithfully,
D. A. SCHOFIELD,
Academic Registrar,
Southampton University.

be called a "monument" it testifies not to Dr Murray's housekeeping, but to her integrity.

Mr Wilby failed to remark the one quality in Dr Murray which, had he appreciated it, would have changed the whole tone of his profile—her sense of humour. I expect Dr Murray will be quietly amused by Mr Wilby's comments; but I think the others of the "first 16" are more likely to join with me in resenting them.

Yours faithfully,
ROMA GILL,
English department,
Sheffield University.

KEELE UNIT

from Mr W. R. Bythway
Sir—A spokesman for the University of Keele is quoted (THE SUNDAY TIMES, October 17) as stating that I, as acting director of the Centre for Social Science Research, "was a party to an original decision in December, 1974, which led to the closure of the Centre."

The actual original decision and the critical one was that of the expenditure review committee which decided to recommend that appointments be made to the vacant posts in the Centre. I only learnt that this committee was to consider this matter after the decision was taken. I still have no knowledge of what arguments in favour of making appointments, if any, were presented to that meeting.

Since three of the four posts were then vacant the management committee decided it had no option but to recommend the closure of the centre. As a member of this committee, I strongly disputed this, favouring the option of maintaining the centre before taking such a final decision.

Social science survey research has been dealt two severe blows by the SSRC and the University of Keele. Although the Keele centre is now closed and dispersed, it is not too late for the SSRC to take account of the Keele experience and devise some means of retaining their survey unit.

There is an enormous amount of survey-based research being carried out not only by universities and the SSRC but also by local authorities and numerous national organizations. This is labour-intensive work, requiring large sums of money. Mistakes can be disastrously expensive.

It is critical that there are centres of expertise in survey methodology and that these are managed by committees composed of people who recognize that such pieces should be the last to be subjected to economy cuts and not the first. In the SSRC's success in reviving the survey unit within the coming year, there will, in October, 1976, be no such centres in Britain outside central government.

W. R. BYTHWAY,
University College,
Barnsley.

NATFHE

from Mr A. J. Pointon
Sir—One must assume that David Farnham's article on NATFHE (THE SUNDAY TIMES, October 24) was dictated more by his antipathies than by any objectivity. Two points will suffice.

First, as the conclusion of his article, he classifies the new organization NATFHE as a union for professionals. He cannot be unaware of the CLIA/ATTI conditions of service document which has been typified by one education correspondent as the "skiver's charter".

In one further education/higher education institution at least, there are lecturers facing redundancy because staff who have passed the LL/SL bar are, without additional duties, claiming the right to do no more than lectures per week to the complete courses may have to be closed down.

The Universities Arbitration Committee has threatened this decision when they find that university teachers should be paid higher salaries than teachers in polytechnics, even though the conditions laid down therein have not been accepted in the polytechnics.

Second, Mr Farnham's claim that the viability of APT is threatened by the size of the new NATFHE suggests that his view of the functions of a union is based on something other than the services which the teachers' union has provided.

If he had said that the APT is threatened because there is now a union which, in place of the previous policies, is intending to represent the interests of polytechnic teachers then we should all have had to take note.

However, it is significant that there is nowhere an indication that the interests of polytechnic teachers are better represented under NATFHE than they were before. And surely that is a better criterion for professional than any advanced on the grounds of logic and size.

Yours sincerely,
A. J. POINTON,
Assistant national secretary,
Association of Polytechnic Teachers,
Southampton,
Hampshire.

SMART PROMOTION

from Dr Maryon Hickett
Sir—What with the moratorium and all that, I had almost given up hope of promotion. But reading Robinson on incompetence (THE SUNDAY TIMES, October 24) has filled me with renewed hope.

For, if only one is perceptive enough to recognize the shape of things to come, and smart enough to get in on it, then, if not readerships and professorships, at least gaudier titles seem certain.

Yours sincerely,
MARYON HICKETT,
Wrotham Road,
Mossham,
Kent.

BOOKS AND STUDENTS

from Mr Maryon Hickett
Sir—Your readers may like to know that the National Book League still has available a limited number of copies of *Books and Students*, which was mentioned in Roy Shaw's letter (THE SUNDAY TIMES, October 17).

They can be obtained by sending a stamped, addressed envelope (6in x 9in) to the publicity officer at the NBL.

Yours faithfully,
MARTYN GOFF,
Director,
The National Book League,
7 Albemarle Street,
London.

CHARTRES PUZZLE

from Dr André Linde
Sir—The *Academy and Communism* (THE SUNDAY TIMES, October 24), Sherran's constant reference to the "Ecole des Chartres" (sic) has probably puzzled many of his readers. In fact, "the study of palaeography and diplomatics" is the preserve of the Ecole des Chartres.

To err is human but it would be well worth your while to rectify the "coquille" the learned professor has made. I am sure, unwittingly.

Yours sincerely,
ANDRÉ LINDE,
Bachelier, *Academy and Communism*,
North East London Polytechnic.

A most common denominator

Sir Geoffrey Howe's warning that Britain is facing a "fame-draw", the recent conference on the proper treatment of exceptionally gifted children, and Sir Bernard Lovell's address to the British Association on the social responsibility of the scientist, do, between them, raise some crucial questions about the current relations of talent and society.

Despite philosophical speculations which go back at least as far as Plato, and psychological and sociological studies already begun in the eighteenth century, we know very little about the genesis of exceptional brains and creative gifts in the individual.

There are great dynasties and family-clusters of eminence, in which successive generations seem to produce utterly exceptional individuals, often of a very different cast (the Huxley connexion in this country, one of the most famous and closely studied). In other cases, however, paternal gifts and intermarriage with excellence seem to engender no further distinction and will, in fact, often stifle mediocrity and even outright failure.

The evidence is so intricate and contradictory that most serious students of the subject have been driven to the conclusion that the romantic model has in that poverty, handicapped, the hostility of the environment positively foster genius though they may crush talent. Genius fulfils itself by overcoming impossible odds.

Opposing the romantic theory is the liberal-rational conviction that an immense mass of human potential has, indeed, been crushed by the perennial injustices of economic and social circumstance. It is not only in the country churchyard that we find so many "mute inglorious Miltons" but in the slum, on the factory floor and even in the bourgeois semi-detached, where the philistine, repressive ideals of capitalism have prevented the spontaneous development of a personal vision.

The radical theorist points out, and surely he is entirely right, that great traditions of popular art, of oral literature, of folk-music have vanished all but completely simply because they did not fit the official, canonized, sanctioned or recorded by the ruling culture. Tolstoy was, in his later years, absolutely persuaded that there were men fully equal to Plato or Shakespeare living, speaking, dreaming among the great hosts of the humble and the oppressed. Had Chomsky written, he challenged, *Mad Chomsky*?

But again, the argument defies anything like rigorous substantiation or, what is equally important, refutation. Where a Milton has been mute or a Plato illiterate, where lack of a piece of chalk has kept a Giotto from trying his hand on a bit of slate, we simply have nothing to go by—either way. Hence the circularity, and also the personal acrimony of the

debate now raging on the relative role of heredity and of environment in regard to IQ and to talent.

But the worry is this: while the facts are intractably complex and no adequate theory has been provided, politics and the brutal contingencies of economic crisis are deciding the issue for us. With certain paradoxical exceptions, which I will cite in a moment, the postwar climate in the industrially developed world has been one of more or less conscious and vengeful levelling.

In part, this stems from the overwhelming phenomenon of "Americanization", from the adoption, throughout the western community, of American criteria of egalitarianism, populism and anti-intellectualism. In part, it derives from a profound malaise before the undeniable fact that the old high cultures, the traditional high literatures, particularly in European civilization, had proved sterile in the face of modernity, of the two World Wars and totalitarian barbarism.

This malaise and the potential doubts which came with it particularly affected the very men and women—artists, thinkers, teachers, publicists—who would, by definition, have been the custodians of excellence. But whatever the components of social vengefulness or privileged remorse, of egalitarianism or mass-consumption materialism, the result is plain: whether in the deliberate enfeeblement of the American school-system for the sake of racial equality or in the current British policies over direct grant schools and the standards of university admission, the aim is urgently egalitarian.

Sir Geoffrey Howe speaks of a "fame-draw" when he means the perfectly understandable withdrawal to foreign tax-havens of a handful of literary or pop super-stars. Now the blow to the Exchequer may, as he says, be severe. But what if the damage caused by a further cutting down of the Open University, by a further diminution in the cultural services of BBC radio and television, by a restriction of theatrical and musical activity in London and throughout Britain, would be much much greater?

Already, intellectual and artistic life in this country is greyer than life. Every day some "vital luxury"—and that is precisely what intellectual and imaginative life is, a luxury we cannot do without—every day some vital life-sustaining luxury is being pared away.

Could it be that the cheerful philistinism which now animates public policies towards education and the arts is, in fact, economically self-defeating? It is doubtful whether Britain can, or should want to, retain a place at the summit of the technological march. To become the Japan or the West Germany of the 1980s is a dubious ideal.

On the contrary. It is, one suspects, by its very nature that Britain will have to survive and prosper; by its sciences by its ability to provide a unique climate of tolerance and plural

ity for individual experiment and talent (much of which is only too ready to find a haven here, coming from all over the world), by its preservation of the intellectually and morally complex equilibrium of representative government—a preservation which demands every available bit of creative insight, articulacy, and, dare one say it, personal charisma.

To many an outsider there is something almost suicidal about those current policies against diversity and excellence which would level the community to a most common denominator. Not merely because such policies are based on the crudest of utilitarian or punitive impulses, but because they threaten to erode precisely those assets, those unique potentials on which the future of this society may well depend.

That western democracies should be levelling down precisely the talents which are hunted for and intensely selective use of individual gifts in the Soviet Union and the Soviet bloc is reaching Platonic intensities is an irony over which future historians will ponder.

But the question raised by Sir Bernard Lovell at the British Association meeting a few weeks ago goes well beyond the muddle and misery of our present economic-political crisis. Roughly summarized, Sir Bernard expressed the conviction that the whole notion of pure science, of absolute scientific inquiry may have to be rethought in the light of the contemporary social condition.

Now, as he himself said, Sir Bernard is only adding his voice to a movement of worry and criticism which has been gaining volume throughout the scientific community and the public at large. The worry goes back at least as far as the contrivance of the atom bomb, but it has grown far more acute since the recent developments in molecular biology.

The financial side is obvious enough: ought millions of pounds or millions of dollars be expended on such fantastically costly but also totally abstruse pursuits as the study of fundamental particles in high energy physics—at a time when there is not enough money for medical care at home, let alone in the third world?

The ethical and pragmatic uncertainties are also obvious. Should what is called "genetic engineering", for example, be allowed to reach a point at which interference with the natural mechanism of the creation of "living forms" is introduced in the laboratory pose political and social quandaries, and provocations to abuse which the human mind or the human conscience may well be unable to cope with?

Now, the implicit plea for a "slowing down", indeed, for a "stopping" of certain research, is not a plea for a stricter measure of public control over the laboratory has

obvious force and appeal. But here also, we must, I think, be very careful.

The line between pure and applied science, between what seems extravagantly remote and what looks to be immediately useful and beneficial is fluid and very often a matter of wrong guesses.

But there is a more central consideration. For reasons which we really don't understand—and I want to try and say something about this—reasons that may be connected to nutrition, to climate, to sheer genetic good luck, western man has since the roughly the sixth century BC and that great explosion of intellect in Greece and Asia Minor, been a relentless hunter after rational truth. Like no other, the western tradition of cerebral passion has been one of self-interest, speculative pursuit, of asking radical questions and pursuing answers wherever they may lead.

Other major civilizations have generated great philosophical systems, world religions, they have developed art and music, architecture and languages of unrivalled complexity. But they have not generated this abstract-scientific passion and continuity, and of course, they may well be the more tranquil, even the more happy, for it. We in the West, however, seem to be programmed at some deep level to keep opening doors to the obscurity or menace which lies behind them.

In fact, one suspects that neither public inquiry nor lack of funds, neither public spirit nor a genuine apprehension of what may prove uncontrollable in the unknown, will keep some of the answers in our community from going after the answers, whatever the cost. Now, undeniably, this represents a predatory, possibly a destructive and even self-destructive addition. But it is also our eminent dignity and ought not to be surrendered with for doctrinaire or utilitarian ends.

I think we can say at this point in this dark and rather barbaric century that human beings are no great advancement for God. The capacity to risk extreme danger for the sake of the disinterested hunt after knowledge, the intuition that the truth is finer, more interesting than social justice (and, what is more worrying, that the truth may even be contradictory to it) are about the nearest things we have left of nobility.

The relations between talent and society have always been tenuous and unstable and versatile. The current economic mess and egalitarian impulse do no more than make this discomfort sharper and that subversion more necessary.

George Steiner

The author is professor of English and comparative literature at the University of Geneva. This is an edited version of a talk given on BBC Radio 3.

University economies: easier said than done

To survive and prosper, one needs a four-part policy:

(a) Maximize the flexibility of your resources.

(b) Let us forget about outside incentives, and suppose that the inner urge to save resources will suffice. I have not inquired whether the University of Bradford will in fact have a decline in real costs during this quinquennium (from 19 per cent and 30 per cent (see Pickford, page 10-11) but I cannot guess now, despite the advantage of having Professor Bottomley at hand to guide and advise.

And that university will need to make no excuses for the student numbers which have emerged in the present quinquennium are likely to have been very different from those assumed when it began.

Most of us will have distributed resources in 1972 and 1973—for instance, to departments of chemistry and physics—when the hard facts of 1977 show not to be in any immediate danger of unemployment there is no alchemy for transmuting redundant chemistry into accountants.

This suggests a rather fundamental error in the method of thinking implied by Dr Pickford's book. It assumes a period of realistic planning which is long enough to allow a shift of proportions of staff and resources with a slow turnover, such as a tenured staff.

There is another difficulty. Nearly all the economies which Dr Pickford indicates require for their achievement a sufficient expansion of the economy. This is a contradiction of terms: how can one have a reduction of factors can be improved by additions, without seeking anybody—and also a political factor; Professor X can be called into economy if his empire, nevertheless, is constantly growing, but he will certainly not be asked to reduce it.

Suppose that one has a university system with static student numbers overall, but shifts between subjects which are substantial and not foreseeable for more than three years ahead. This is not a uniquely unworkable situation: plenty of manufacturers produce for markets which change very rapidly, but subject to unforeseeable changes of brand preference.

Significant economies of scale are evident in applied biology even though no deliberate attempts have been made to find them. An 88 per cent increase in student numbers can be accommodated with a 44 per cent increase in the total cost of the course.

The quotation is from a very interesting new book on *University Expansion and Finance* by Michael Pickford; he is talking about—no prizes for guessing this—the University of Bradford. A series of papers from Professor Bottomley and his colleagues at the university have accumulated up to the idea that vast economies, unaccompanied by harmful effects, are possible in the operation of universities.

To his credit, Dr Pickford does point out some snags; but, careful and well-written as his book is, it still leaves an impression that we ought to be able to find some large savings in buildings and administration as well as academic and ancillary staff. Why don't we get on and make these savings, then, escaping from the pressure of the present shortage of money?

One answer is that the incentive to make economies is partial and diffuse. There is hardly any incentive to economize in using the buildings one has already got; ingenious plans for "chipping out" building space do not really help, because it is very doubtful if a satisfactory way could be found of leasing the spare released by the economist. Who would short lease of a third of a chemistry laboratory?

A university has a general incentive to economize in the use of its recurrent grant (thus keeping out of Garry Street and perhaps increasing its freedom of manoeuvre). But it is not easy to pass on an incentive to individual departments. Certainly it will help if they receive as much as possible in the form of a block grant, so that they have a chance to choose an economic pattern of expenditure.

But it is not much of a chance since most expenditure is fixed by past decisions. An increase in the recurrent grant will help, but for universities which are not making much overall growth, but subject to unforeseeable changes of brand preference.

over-staffing until someone chooses to retire or leave, and that may mean waiting for a decade.

But let us forget about outside incentives, and suppose that the inner urge to save resources will suffice. I have not inquired whether the University of Bradford will in fact have a decline in real costs during this quinquennium (from 19 per cent and 30 per cent (see Pickford, page 10-11) but I cannot guess now, despite the advantage of having Professor Bottomley at hand to guide and advise.

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wide plenty of examples of plans which never came to anything. The case for efficiency needs first of all an understanding of the impact of uncertainty; it needs effective and quick adaptation to unforeseen change.

That adaptation is not always possible. If, to large changes of student preference, both between subjects and between higher education and other work, you add sudden shifts of Government policy, and a total absence of assurance about the future of that policy, you create a situation in which not even Marks and Spencers could run a university efficiently.

Thus, in my university, we have about 3,900 students, but buildings for 3,300. Because the recurrent and capital programmes have ceased to be in their proper relation.

We intended a staff-student ratio of 1 to 10 (main teaching grades to full-time students), and were reluctantly prepared to see this ratio slide to 1 to 11; but the actual ratio is better than 1 to 9, because we increased staff early in the quinquennium in the expectation of a greater expansion than has actually occurred.

This overall ratio conceals gross discrepancies between departments, none of which were intended, but few of which can quickly be rectified.

It is good to learn from Dr Pickford's interesting statistical survey of administrative expenditure that even in the distant days of 1965-70 our administrative costs were a little less than predicted, because that suggests they must now be very economical indeed; and no doubt we could point to one or two other areas of successful management.

But, overall, we are not efficient; the world has changed faster than we can adapt to it. Economies are not easy and, if Government want improved efficiency in universities, they must begin by reducing our uncertainties.

Charles Carter

The author is vice-chancellor of Lancaster University.

BOOKS

Develop by fits and starts

The Sociology of the Third World
by J. R. Goldthorpe
Cambridge University Press, £6.50
and £2.50
ISBN 0 521 20521 2 and 09924 2

This is a clear, useful and valuable book. In a certain sense, it does not aspire to expound some new idea, issue, vision or theory. It merely surveys a field, in a very extensive one, and this with lucidity, thoroughness and balance. The "Third World" set of countries now lumped under industrial affluence—in other all countries other than those in some measure possess it. "development", the secular, the recovery of man's sociology twice, and with so much force that one is sometimes tempted to quote sociology with it. In the nineteenth century, development or evolution was seen as the plot of all human history. The nineteenth century, or post-Victorian, view of it is different: dramatic and radical development, such as is exemplified by recent history, is seen as a mysterious idiosyncrasy, with specific rather than general and even-present roots, and as something discontinuous with change. Dr Goldthorpe clearly belongs to the moderns rather than the ancients on this question.

After the great burst of innovative energy which is now generally regarded as having occurred around 7000-5000 BC there followed some 5000 years of relative technological stagnation. A detached and unbiased observer... surveying human civilisations about the year 1600 would undoubtedly have pointed to China as the most developed. It might have hesitated whether to put India or the Islamic world in second place, and it is unlikely that he would have put Europe

higher than fourth. Yet by 1800 the domination of Europe was unchallenged. In other words, whatever it was, it does not seem to have been happening all the time, or at a steady rate. It happened in one place, and in a manner which defied previous track records.

However, one merit of the book is that Goldthorpe does not, as some development specialists have, simply take the new perspective for granted. On the contrary, he lucidly relates the problem of contemporary industrial growth in backward countries into both the overall history of mankind, and to the earlier and different perspective in sociology. Within the narrower interpretation of his theme, Goldthorpe surveys the various aspects of development—economic, political, cultural, educational and so forth. The presentation is highly balanced, both in the sense of giving a fair run to diverse views and in the selection of illustrative material. The author's East African experience, to which he alludes in the preface, has not prevented him from making good use of material from other regions. The book seems, fairly obviously, to be the "book of the course".

One or two minor slips: Hong Kong is not, at the time of writing, the last survivor of "enclaves of foreign rule on Chinese soil"; and, on the same page, the author seems to endorse a "strange list of four brown peaks" which countries which escaped being engulfed by white supremacy in 1914. Whatever criteria one chooses, the list is too short or too long. As Goldthorpe observes, one issue in development strategy is whether to go for balanced or unbalanced growth. The option between balance and shock also applies to the teaching of the subject. This book is clearly an example of the balanced approach.

Ernest Gellner

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HUTCHINSON

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Can the centre hold?

Center and Periphery: Essays in Macrosociology
by Edward Shils
University of Chicago Press, £10.75
ISBN 0 226 75317 4

In a public lecture I gave in 1971 I said something of Edward Shils which, if I could now say it better I would, and by which I still stand. I spoke of his "benign influence" and went on to tell how in Britain, "He brought to us knowledge of what had been and was being done in the United States with the authority of one who was a major contributor to that achievement. He stressed for us the importance in making society possible of the functions of primary bonds, seldom articulated, working at the most fundamental level of the social. He inspired our new students, over more numerous, with a belief in their endeavours and the desirability of sustained empirical inquiry. He perhaps failed to communicate to all of them his sense of the dangerous in social life. But to all of his students sociology became not only a discipline, but a commitment, and from him many learnt a quirky tolerance and a resigned moralism."

This second volume of Shils' essays (*The Intellectual and the Powers* appeared in 1972) bears out what I had to say even better than his predecessor. It also makes me want to gloss a little two points which are related. I spoke of benignity and a lesson of resignation: in doing so I perhaps made Shils sound insipid, incapable of passion, incapable of rage, incapable of decision. Without passion, rage and decision no real intellectual work is possible in sociology or in any science or branch of scholarship. A merely placid Shils would be a falsification of reality. Shils and his work have been loved by those who have been deeply disliked by many of those who formally agree with his stance in the intellectual and political battles of the age. Even his double career in America and Europe, in Chicago and London and Cambridge, has been a cause for dissent in a time when national prejudice, isolationism and populism have all, even if covertly, renewed their strength. And in addition some of his concerns have become unfashionable in general, have been underestimated precisely because his particular engagements to the new nations, for example, have been manifested through modes of thought and approach that are discomfiting to received attitudes and judgments.

Which is to say that Shils is, and has ever been, very much of his time. The long new introduction to these papers is among other things, an intellectual history of Shils, a biography of influence, experience and reflection. It is, to repeat a word I used above, a cause for genuine, understandable, quirky, but not of books and of teachers, rather than of society. It is a story of a blind man feeling his way along a captured, frieze. As such, it is both a warning and a challenge. It is a warning, for the world would be a better place if it were not so full of blind men. It is a challenge, for the world would be a better place if it were not so full of blind men. It is a warning, for the world would be a better place if it were not so full of blind men. It is a challenge, for the world would be a better place if it were not so full of blind men.

Such a situation is difficult and precarious and Shils is intensely aware of the difficulties of attaining to it. He is a kind of prophet, in the sense that his work on the new nations and the intellectuals turns here (or perhaps there) into a warning and the military, in new states, being good examples of his wary informed strengths. In a sense, too, he is a prophet, for his work does not stand on the precariousness and the order and the military, in new states, being good examples of his wary informed strengths. In a sense, too, he is a prophet, for his work does not stand on the precariousness and the order and the military, in new states, being good examples of his wary informed strengths.

One cannot, he writes, "speak about society without at the same time making statements about the integration of society. That is what sociology is." This is the classic statement of the central question of sociology. But as simply as this is true, it is also, very wonderfully, a statement of the journey of modern sociology, which is sociology taken as



Edward Shils

one of the most serious of all possible quests.

In his introduction Shils takes one on that journey, but the reader who does not know his Aristotle and his Lasswell, his Sinuel and his Tawney, his Frank Knight and his Durkheim, may not easily be able to follow him. But if the reader goes on to the texts he will find it all becoming much more clear, and he will find that much more is being asserted—with strong reason—than the tentative, patient tone suggests. But what is being asserted is congruent and continuous with a tradition of sociology which has been evolved since the age of Spencer and Taylor down to the present by way of Durkheim, Weber, Parsons and so many others. It is accepted then that Marxism, except in those rare—but real—developments of high learning and historical sophistication which to me seem hardly Marxist, must be rejected. There is no sociologist of distinction from whom the ordinary Marxist can gain less than from Shils, except, perhaps, to find reasons for abandoning Marxism and turning to sociology itself for the solution of sociological problems.

As the title tells us Shils sees society as having a centre, distance from which reduces participation in the goods, tasks, purposes specific to being a member of the society. (As I understand him this was a concept of which, in some of his work, Halbach in France had a similar formulation which he rather mechanically strove to "operationalise". Shils, however, does not refer to this great disciple of Durkheim.) This centre is the property of the sacred at its most extreme, the sacred which is the categories of value and virtue. Shils takes from the immense store of Weberian concepts the idea of charisma, the power and ground of legitimate power, but he does not see charisma as being a specific social and transitory as Weber usually conceived it. Rather it is, for Shils, a survival routine and is not far by being dispersed. Indeed, the very notion of charisma into the periphery is, in an indispensable condition of civility, but it is not a sufficient ground for its existence. Civility entails not only the imputation of charisma to the mass of the population by itself, it also requires the establishment and effective order and the military, in new states, being good examples of his wary informed strengths.

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tical pamphlet: *The Torment of Secrecy*, which, published nearly two decades ago, deploys his knowledge of the McCarthy period and his privileged access to the scientists of the early atomic age. It is a strong and informed defence of freedom and, as such, daring and relevant to our tormented 1970s where freedom is so out of fashion. It is effective just because it is so well informed and something of a merit is discernible in the paper *Privacy and Power* given here, a paper the relevance of which grows daily.

The other side of his concern about the precariousness of civility is what is often called his "conservatism". Rightly or wrongly Shils was as I recall identified in immediately postwar England as a sympathizer and even councillor of the Labour Party and the builders of the Welfare State—even in a way as the natural heir of Karl Mannheim, though without the latter's utopian faith in planning. Whatever his allegiances then, and as an American he was, of course, not part of British party politics, it would be hard to identify them now as a defender of ordered liberty, or of any ideology. But can a writer escape ideology?

It is customary to say that ideology is unavoidable and that all science and all judgment are touched by unconscious, socially derived, passions and desires. The paradox that the ideological is, in fact, the most ideological is widely held. In a very weak sense, the concept of ideology is, indeed, unavoidable. In a similar weak sense, it can be argued that all acts which are voluntary are also pleasure-seeking (or pain-minimizing), even acts of voluntary martyrdom. But if words are pushed in this way then they become meaningless. Shils is very aware of ideological infections and he is also because of his profession, his copiousness and his positions in at least two cultures, not to mention his scepticism, remarkably unideological. If he is a "conservative" then it is not in a sense that will define his allegiance but only his repudiations of the tyrannous, the muddled and the false. He is not, I have heard it put, the "sociology of conservatism". In the very inaccurate enough—that Oakmont is the "philosophy of conservatism".

"In consequence he does not give positive prescriptions, but suggests negative ones. This is found disappointing by ideologues. Others will find in it much to study and to praise."

Not all of the essays are equal in quality and there is some repetition in this long volume. I personally still do not agree with the famous essay (with Michael Young) on the corporation, of 1953. On the other hand, I rejoice in the republished classic papers like that on power and status (with H. Goldhamer), which dates from 1939 along with his more recent work on the nature of the social order. Macrosociology is about the history of humankind, and the history of humankind is about the nature of the social order. This is surely true. The book is a treasure trove of ideas and insights, and it is a pity that it is not more widely read. It is a pity that it is not more widely read. It is a pity that it is not more widely read.

Donald Mackenzie

Prehistory

The Environment of Early Man in the British Isles
by John G. Evans
Elek, £5.00
ISBN 0 236 30902 1

Dr Evans has written a lively and valuable book which attempts, and in large measure achieves, the aim of introducing us to the wealth of evidence about man's past environment which archaeologists, pollen analysts, zoologists and others have made available. The task of reconstructing the changing environment of early man is a complex and constantly pulls us in opposite directions, either towards the careful evaluation of methodology at one extreme or towards the creation of plausible and coherent myths at the other. All too often the two approaches are not fully compatible and most recent books on the role of science in archaeology have tended towards the first. The present book adopts a chronological approach and inevitably veers more in the second direction.

It begins, after the briefest of preambles, with an account of the life and times of "Swancombe man". In this and subsequent chapters, key sites, definitive studies and critical problems are used to introduce a brief account of the main types of evidence employed and the various frames of reference within which reconstructions are attempted. Themes and periods of particular significance or contention are usually accorded careful and balanced discussion. The book thus gains much in fluency and coherence without losing sight of alternative interpretations and problematical events. Only occasionally does this lead to difficulties, as when technical terms are used before their meaning is explained.

Significant virtues include warmth and humanity, a minimum of jargon, an imaginative, sympathetic eye for present-day landscapes and their antecedents and a sensitive concern for the broad context of human endeavour which never permits us to lose sight of the present-day landscape. Thus present-day landscape features and activities are linked with the pattern of change which helped to create them and the interweaving of present and past adds both colour and realism. At the same time the ecosystem framework adopted unobtrusively by the author ensures that the conclusions, inferences and generalizations made are more convincing than the purely earlier, narrowly deterministic analyses.

The author's grasp of a wide and disparate literature is impressive. We are reminded, where appropriate, of the bold inferences of a generation of writers who, like Sir Cyril Fox, helped to create the modern concept of prehistory. The diversity of British soils and landscapes, at the same time, very recent research is consistently presented in a succinct and authoritative way, with very few omissions. The author's grasp of a wide and disparate literature is impressive. We are reminded, where appropriate, of the bold inferences of a generation of writers who, like Sir Cyril Fox, helped to create the modern concept of prehistory.

The importance of the book lies mainly in its potential value for students of archaeology, historical geography and more generally environmental studies who are still, sadly and enthusiastically, within "Romantic" Stage of their education. For them the book provides a stimulating introduction and points the way to the sources to be studied at first hand in any subsequent search for more detailed knowledge and greater precision. The book is a treasure trove of ideas and insights, and it is a pity that it is not more widely read. It is a pity that it is not more widely read.

Chemistry and Pollution
edited by F. R. Benn and C. A. McAuliffe
Macmillan, £8.95
ISBN 333 13888 0

Each of the six chapters in this book, which attempts to "present a factual chemical background" to the pollution debate, describes the chemical basis of a particular aspect of environmental pollution. Any book which has eight contributing authors is likely to be uneven in quality. It is unfortunate that the first contribution, a summary of the photochemistry of polymers and a discussion of their sensitization to environmental degradation, is the most chemically demanding in the book. It is likely to frustrate the editors' hope that the book will be useful to those students of environmental pollution who have "only basic chemical backgrounds".

The second chapter "deals with refuse which falls within the local authority domain". It examines the relative merits of a number of methods of waste disposal and outlines schemes for the production of oil and gas from waste materials as well as the author's own process for converting cellulose to ethanol. The chapter is intensely irritating to read. Conventional punctuation is ignored frequently and the author's meaning is sometimes unclear. What is meant by the statement that "bacteriological decomposition can be carried out by mesophilic or thermophilic bacteria (actinomycetes and fungi)"?

The editors' admission that no attempt has been made to restrict the author's individual styles is simply an abdication of editorial responsibility. The editors contribute the third chapter—a conventional review of insecticides, herbicides and fungicides and of some of the environmental problems associated with their use. Difficulties of communication remain, but fortunately, there are lighter moments, eg. "The population growth is determined not only by the birth rate, a popular misapprehension...". It is not clear what is meant by the statement that, in 1945, Caylon "had a death rate of twenty-two per thousand" and difficulties of interpretation are likely to arise from the data quoted about the reduction of pesticides by the author. No one will be comforted by the opinion that the environmental problems associated with paracetamol are "minimal" as far as the soil is concerned since "adsorption effectively removes the material permanently".

A more cautious tone is discernible in the chapter on acid rain, which deals with the formation of atmospheric pollutants and of the methods by which they may be monitored. The authors admit that "the relationship of air pollution to the ecology of the environment is almost a total mystery". The penultimate chapter, "Waste waters and their treatment", describes the impact of detergents on sewage treatment and indicates some of the problems arising from the disposal of industrial effluents. The chapter, however, is inevitably, it is, however, less than might be anticipated since this final contribution is more concerned with the chemical nature of detergents than with pollution problems arising from their use.

Chemistry and Pollution brings together information which is not usually encompassed by a single book, and some selection of topics has obviously been necessary. Many of the chapters are excellent, but the book is marred by the inclusion of two or three chapters on acid rain, which are of little interest to the general reader. The book is marred by the inclusion of two or three chapters on acid rain, which are of little interest to the general reader. The book is marred by the inclusion of two or three chapters on acid rain, which are of little interest to the general reader.

Waste not

BOOKS

Properties of polymers

Mechanics of Polymers
by R. G. C. Arridge
Clarendon Press: Oxford University Press, £6.50
ISBN 0 19 859136 5

The purpose of this book is to provide a link between the more practical aspects of plastics and... the fundamental properties of the polymers from which they are made. It is intended for degree students of engineering and materials science and for those who are engaged in a second-year honours course in physics or applied science.

Following an introductory chapter on "Plastics as materials", the book deals with the thermal properties (in two chapters) and mechanical behaviour (in four chapters) of solid polymers. The emphasis, therefore, is upon polymeric solids as continuous media, although brief references are made to the microscopic structure of crystalline polymers and to methods for describing the continuum elasticity of crystalline aggregates.

The opening chapter on plastics deals with the mechanical properties of plastics. It examines the relative merits of a number of methods of waste disposal and outlines schemes for the production of oil and gas from waste materials as well as the author's own process for converting cellulose to ethanol. The chapter is intensely irritating to read. Conventional punctuation is ignored frequently and the author's meaning is sometimes unclear. What is meant by the statement that "bacteriological decomposition can be carried out by mesophilic or thermophilic bacteria (actinomycetes and fungi)"?

There are six chapters. The first gives a comprehensive and lucid account of the distribution and evolution of the chemical elements. Chapter two summarizes the characteristic features of rocks and minerals and briefly introduces mineral technology. Of necessity, in such a small book, the latter topics are considered in a very succinct, and somewhat, intelligible manner and the text is amply supplemented with figures and tables. The tabular classification of igneous rocks, however, embodies several misleading features.

A clear and well-illustrated account of the atomic structure of minerals in chapter three is marred by several minor, but nevertheless significant, errors in mineral formulae. The role of physical chemistry in elucidating three major geological processes—magmatic crystallization, metamorphism, and weathering and sedimentation—is considered in chapter four, which comprises just under a quarter of the total text. The application of phase equilibria to the crystallization of minerals is rather sketchy in its presentation and the importance of fractional crystallization in producing diversity in igneous rocks is insufficiently emphasized. Likewise metamorphic processes receive rather scant consideration.

The influence of the atmosphere, biosphere and man on the geochemical cycle is the basis of chapter five and students new to the subject should find the section on organic geochemistry particularly interesting. In the last chapter there are suggestions for simple experimental work, and the book concludes with suggestions for further reading and an adequate index. Attention must be drawn to a serious omission from a text dealing with the chemistry of rocks, namely representative chemical analyses. These could have been readily introduced, for example, in the section on igneous rocks and would have been of great value to the student. In spite of this and other occasional shortcomings, the approach and coverage of the book are good and it can be recommended for those wanting a basic introductory text.

Norman S. Angus

of deformation is somewhat unbalanced, devoting 26 pages to classical elasticity theory and only nine to finite strain theory which constitutes so large a part of the mechanics of polymers. Once again there is a lack of connective tissue relating the subject matter of the chapter to the wider manifestations of non-Hookean behaviour, i.e. non-linearity and time-dependence, but otherwise the treatment is clear and adequate. The book ends with rather brief reviews of mechanical anisotropy (including some useful material not previously featured in the textbooks) and on yield and fracture. Appendices are provided to assist the reader unfamiliar with vectors, tensors and matrix algebra. In spite of the minor criticisms recorded above, this is a well-written and thoughtfully presented book which can be recommended for honours degree students and for others seeking a foundation in the thermal and mechanical properties of polymeric materials.

The opening chapter on plastics deals with the mechanical properties of plastics. It examines the relative merits of a number of methods of waste disposal and outlines schemes for the production of oil and gas from waste materials as well as the author's own process for converting cellulose to ethanol. The chapter is intensely irritating to read. Conventional punctuation is ignored frequently and the author's meaning is sometimes unclear. What is meant by the statement that "bacteriological decomposition can be carried out by mesophilic or thermophilic bacteria (actinomycetes and fungi)"?

E. H. Andrews

Geochemistry

An Introduction to the Chemistry of Rocks and Minerals
by M. B. Peirce
Edward Arnold, £8.80 and £1.90
ISBN 0 7131 2498 9 and 2499 7

A superfluity of new elementary texts in earth science confronts the teacher and student today. In the currently important field of geochemistry, however, there is an acute need for a concise, introductory textbook. *An Introduction to the Chemistry of Rocks and Minerals*, which is the latest contribution to the series Studies in Chemistry goes some way toward alleviating this need.

There are six chapters. The first gives a comprehensive and lucid account of the distribution and evolution of the chemical elements. Chapter two summarizes the characteristic features of rocks and minerals and briefly introduces mineral technology. Of necessity, in such a small book, the latter topics are considered in a very succinct, and somewhat, intelligible manner and the text is amply supplemented with figures and tables. The tabular classification of igneous rocks, however, embodies several misleading features.

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BOOKS



Roger Fowle

BOOKS

Vocal effects in a sermon

The English Tone of Voice: Essays in Intonation, Prosody and Paralinguistics
by David Crystal
Edward Arnold, £7.50 and £3.75
ISBN 0 7131 5501 8 and 5802 6

This book's popular-sounding title could be very misleading—the contents are in fact scholarly in nature; nevertheless, if he perseveres in the face of a certain amount of unfamiliar terminology, the educated general reader should find Professor Crystal's study of intonation and other vocal effects reasonably accessible and rewarding. The terminological problems begin in the subtitle of the book, which contains a trap and a puzzle. A trap, because "prosody" will normally be taken as the study of verse forms, and a puzzle, because few people have even heard the word "paralinguistics" (even professional linguists disagree on how it should be defined (see chapter two "Current trends in paralinguistics"). There are a number of occasions, especially in the opening pages of the book, when a footnote would have been helpful in explaining the meaning of a technical term; this is particularly true of the fundamental terms in Professor Crystal's theory, such as "tone-unit", "tonicity" and "nuclear type". In nearly all cases, though, a study of the examples cited (not always directly after the introduction of the term) should see the reader through.

The eight chapters of the book are based on revised versions of journal articles or conference papers written by the author between 1969 and 1973. It is thus in part a continuation and updating of his book *Prosodic Systems and Intonation in English* (1969). Professor Crystal notes two ways in which that work fell short:

(1) The relationship between prosodic

phenomena and general linguistic theory was inadequately treated; chapter one of the present volume, "Prosodic features and linguistic theory" is intended to remedy this. (2) No account was taken of possible applications of prosodic studies in other fields: chapters five to eight here explore aspects of sociolinguistics, stylistics and language acquisition.

There are three chief characteristics of Professor Crystal's approach. First he rejects the view that intonation is a single, unitary phenomenon. It is rather the product of the interaction of features from different prosodic systems—tone, pitch-range, loudness, rhythmicity and tempo in particular.

Second, whereas most Chomskyan generative grammarians assume that the intonation of a sentence is totally determined by its syntactic structure, Professor Crystal believes that the various aspects of the intonation of a sentence are determined by different sets of properties. Thus while the placement of tone-unit boundaries is determined by syntactic structure exclusively, intonation (the position of the main accent within a tone-unit) is primarily determined by lexical or semantic factors, and only sporadically by syntax; there are other vocal effects which are to be accounted for purely in terms of "affective meaning" (attitudes such as "absence of emotional involvement").

And, third, he takes issue with generative grammarians on "their curious semi-awareness of the problem of reliable data", a condition which, as he rightly points out, stems partly from a certain antagonism towards "discovery procedures". The problem is doubly acute for intonation studies because of the comparatively little empirical investigation that has been carried out in this field; Professor Crystal has tried to

stop this gap by basing his theory on an analysis of eight hours of spontaneous English conversation. This is a healthy corrective on all counts to what has been the dominant viewpoint among generative grammarians: Professor Crystal's useful summary of what he calls "the generative debate" shows clearly the over-simplification involved.

On the debit side, it must be said that the chapters are uneven in quality. For instance, the argument of chapter four, "Relative and absolute intonation analysis", appears to reduce to little more than a tinkering with the meaning of "absolute" so as to make it mean, in effect, "relative"; it is then little wonder that some aspects of what everyone has always thought to be relative could after all be described as absolute. The collection would have been better without this chapter.

Again, while the hypotheses put forward are often well chosen and plausible (in that good sense of that word), the details of argumentation often do not quite seem to add up to the conclusions which Professor Crystal reaches. Take for example the brief but suggestive chapter six, "Non-segmental phonology and sociolinguistic distinctiveness: an illustration from religious language". His ultimate aim is to show that the neglect of intonation and prosodic features in sociolinguistic research so far is understandable.

Four "modalities" or genres within religious language (more correctly, the language of church services, actually) are distinguished: unison prayers, individually-read prayers, biblical readings and sermons. He seeks out to substantiate this thesis by demonstrating that differences of prosodic features correlate clearly with differences between the modalities, even when

vocabulary, syntax, and pronunciation of sounds are relatively constant throughout.

But surely Professor Crystal is underestimating the degree to which syntax can be of help: the two syntactic features he cites as typical of "religious language" are far from uniform across the modalities. The feature called "extensive vocative structures" is under-differentiated: surely vocatives are much more frequent in prayers than in biblical readings or sermons, even if they occur in all the modalities. "Archaic verb morphology" occurs very frequently in prayers and biblical readings—one hears very little of it in sermons, however, except when the preacher is quoting.

Even from these sketchy generalizations and the few pieces of illustration, claims Professor Crystal, it should be clear that non-segmental features are easily able to demarcate the four modalities. Nothing of the kind; "sketchy generalizations" and snippets of illustration do not constitute an argument, and hence cannot make anything clear. Nor can a few hours of recordings made in a Catholic church in England serve as a basis for generalizations about "the sermon" in general; is it proper to link remarks on these recordings with the "chant" characteristics of American folk sermons or Afro-American gospel music, as Professor Crystal does?

My final verdict is that the book is expensive, uneven and needs to be treated with caution on occasion; but at the same time it is potentially stimulating to the general reader interested in speech, useful for students and a valuable counterbalance to much current thinking and writing on intonation.

Erik Fudge

Salutary but frustrating

Saying and Understanding: A Generative Theory of Illocutions
by Charles Travis
Blackwell, £3.00
ISBN 0 631 15770 0

Some parts of linguistic theory are currently in so uncertain a state that any contribution to them might be thought welcome. Of none is this more true than of the theory of speech acts or illocutions, inherited from Austin's pioneer work. The subtitle of Professor Travis's book will certainly arouse hopes for relief from this uncertainty among those interested in linguistics generally or speech act theory in particular. It should be made clear at once, then, as the author himself makes clear in his preface, that his work must be a disappointment if it is approached in that way. For it is, as he admits, no generative theory of illocutions at all. Instead it considers a number of topics varied enough to show many of the sorts of problems that arise in constructing such a theory. The book is an interim report on these topics, and deals with much more than that of illocutionary force.

Certain general principles guide the selection and discussion of the topics. Professor Travis wishes to map out the variety of features which we say. Hence there are chapters of statement, identity and propositional identity which examine and summarize distinctive aspects of what we say. There are similar treatments of understanding in relation both to the illocutionary force of utterances, and to the hidden complexities of even simple predicative expressions in their context of utterance. In these sections Professor Travis is plainly impressed by the enormous wealth of material which we make use of in uttering the colloquial discourse. In this respect his general attitude here is rather like that of Ziff. Finally, there is a long discussion of hypotheticality in which he deals with illocutions as a simple truth-functional analysis, and the paradoxes

of implication. His own account of hypotheticals suggests that he is by no means alone in his analysis in terms of possible worlds, but he is ultimately willing to accept such an analysis in some form.

Professor Travis's discussion of detailed issues is often stimulating, but both in detail and as a whole the book suffers from a lack of explicitness and conclusiveness. The account of hypotheticals is sketched rather than fully drawn, and the discussion would have been helped by some reference to, and comparison with, other treatments—for example, David Lewis's of counterfactuals. The discussion of illocutionary force admits the uncertainty of the notion, but fails to replace it with a clear or convincing alternative. In some respects the account is similar to that outlined by Cohen (in the *Philosophical Quarterly* 1964, and *Ratio* 1973), but no such references or comparisons are made. Again, although the text does cover emphasized the author's resistance to a semantic conception of truth, and so presumably to an account of meaning in terms of truth conditions, his position in this respect is not explicitly distinguished from any specific version of a truth condition theory. There is no discussion of, or comparison with, such an account as that of Lewis (in *General Semantics*), and why Professor Travis thinks such an account inadequate, or exactly how his own theory would differ from it.

The central impression which the book seems designed to make on the reader is that of the immense complexity of linguistic data, and the difficulty of capturing them in some general theory. But it is hard to keep the feeling that, daunting though such a task is, Professor Travis makes it seem much more difficult by rejecting help from other theorists. In this respect the truth condition theorists, and some recent work by Cohen on speech acts, and Kripke on presupposition, offer a more optimistic prospect. Unlike these theories, Professor Travis underestimates the difficulties in the subject, rather than relating them, it may be salutary to do this, but it is also frustrating.

G. H. Bird

Protestant

Style and Structure in Literature
Essays in the New Stylistics
edited by Roger Fowler
Blackwell, £6.00
ISBN 0 631 15640 2

The word which comes to mind in reading this book is protestantism. It is a protest, as a whole, to be full, careful and straightforward in style, rather like seeing seven bags of a rabbit—despite the sex war, the scientific motives for the protestantism cannot quite be seen in the efficient and mechanical deconstruction.

Two competing feelings dominated my response to the book. First, that these are seven men wishing to utilize the advances in linguistics in order to produce a more accurate and more complete knowledge of language. Second, that these are seven men wishing to demarcate the four modalities. Nothing of the kind; "sketchy generalizations" and snippets of illustration do not constitute an argument, and hence cannot make anything clear. Nor can a few hours of recordings made in a Catholic church in England serve as a basis for generalizations about "the sermon" in general; is it proper to link remarks on these recordings with the "chant" characteristics of American folk sermons or Afro-American gospel music, as Professor Crystal does?

Seymour Chatman writes the essay on narrative voice and his continuation of his well-known excellent earlier work on narrative and this addition is undoubtedly one of the best essays on the different modes of narrative presence which has yet been written. It is possible in the "speech act" theory of a language developed by Austin taken up in different ways by Searle and Richard Ohmann, and is proving to be one of the most fruitful areas of linguistics for literary theorists (mainly, I think, because it is the main area of linguistics to which the literary theorist has been actively introducing a speaker and the formal nature of his speech—most of linguistics content to analyse only the text. Chatman, like Freeman, has a ability to make new ideas covalesce on the basis of his linguistic knowledge, and in the end these two, especially, linguistics comes a really houristic device.

But my second response to the book, alongside a dutiful respect for its scientific aims, brings me back to the emancipated rabbit; I feel that the seven essays are another, that somehow a new operation was going on, and the book's structuralism and literary had been vitally reduced. What was taking place was a incorporation of the most recent aspects of structuralism by the version of American New Criticism, later the enemy. Things which seem alive and brilliant on the pages of Barthes and Kristeva become peculiarly dull and boring here, and I make this point not to criticize the author, but to the romantic defence of "general" knowledge, and in the end these two, especially, linguistics comes a really houristic device.

Here, stripped of Barthes's poetic bravura and the glamour of natural criticism which surrounded it in France, literary structuralism appears earnest, worthy, but rather thin and isolated, and becomes purely technical in its never stops to question the ideological theory of the French New Criticism. Chatman comes close to asking the question of "general" knowledge, and in the end these two, especially, linguistics comes a really houristic device.

The book offers, then, some essays on how literature operates—narrative—is not, as is often said, a purely technical operation. But it is also, by definition, a purely technical operation. It shows clearly why Barthes's early leaders in this field should have turned away from purely technical considerations and consider the pleasure that literature has to offer. The book, in its own way, is a protestantism.

Allan Hugh

Scots as she is spoke

The Linguistic Atlas of Scotland, Scots Section, volume 1
edited by J. Y. Mather and M. H. Speidel
cartography by G. W. Leslie
Croom Helm, £29.50
ISBN 0 85664 160 X

This volume will lead a series containing the results of the Linguistic Survey of Scotland, Professor Angus McIntosh's preface congratulates the start of publication twenty years after his introduction to the project and forty years after the original Memorandum by John Orr (to whom the dedication) on the idea of the survey, and promises two volumes of word-geography and a third of phonological observations, dealing with the Scots material (doubtless the Gaelic will follow).

The atlas maps the distribution in Shetland, Orkney, Scotland (not the Outer Hebrides where Scots is not spoken), North Ireland and North England, of a selection of Scots dialect words (mostly concrete nouns) taken from the written returns made by correspondents to a postal questionnaire in the 1950s. The body of the work is 423 maps in conjunction with 90 word-lists, the edited collections of some of the questionnaire returns from which the mapped items were chosen.

The introduction (which serves this and the next volume, which will carry an index) is both an apology for the existence of the LSS in the University of Edinburgh and an apology for the unsatisfactory nature of the material available for mapping. It shows how the editors had to meet the deficiencies caused by the naive use of the postal questionnaire (a method now probably killed off by the "profitable" GPO). They have done well to make presentable to the 1970s a body of material collected in the 1950s by a scheme devised to the theory of the 1940s. But not all their meagre scholarship could compensate for the haphazard distribution of returns, or the uncontrolled ortho-

graphic variables in the spelling of the questionnaire answers.

The work is concerned with Scots dialect words, words which deviate from the vocabulary of the Standard English of Scotland. Yet in map 18 (porridge bowl) Standard English *bowl* and *bowl* are shown alongside *tuggie*, *coggie* and *bicker*. And in the series of words for various kinds of dung (*shite*) is rare in Scots, used by only 15 reporters, even for cowmuck, and five of these were North English; *turd* in various forms is better represented in maps 60-63, 68, *shern*, *clap*, *plat*, *arts*, *dollars*, *rollies*, *parties*, *trinities*, *puris*, *dries*, and their variants, are clearly dialect words, *manure*, *dung*, *muck*, *droppings* and *dirt* are not.

The word-geography is impaired by the distractions of variant spellings in the material and in the mapped result. Variant forms of word should have been more rigorously subsumed rather than plotted separately. In many maps this obscures the main features of word-distribution. In map 38 (a swing) we could have done with four shadings (*shood*, *shog*, *hikie*, *sway*) instead of 12.

The reliance on isogloss analysis, not to my taste, causes the maps to omit the isolated occurrences of a word. Absence of information from an area on the map may be due to this method—or to the area's being uninhabited. A lot of Scotland is. The book obscures this by making it impossible to juxtapose and difficult to compare the population-map and the physical geography map of Appendix D with the main word-maps. Hence one might wrongly assume that there are no native English speakers west of the Highland Line, or that *seamits* (underweasts, which, by the way, appear to be unique in much of the country, map 12A) are unknown in the Cairngorms. Kilt? The isogloss effect blanks out inhabited areas, too. Map 1 (ankle) does not reveal that the word *kilt/kil* etc. is as frequent in Shet-

land as the mapped *ankler* and is also reported from most parts of Scotland. Map 2 (the little finger) omits the word *crammie/creeenie* etc from Shetland, Orkney, Caithness, Sutherland, Perth, Stirling, Dunbarton, Renfrew, Lanark, West Lothian, Midlothian, and Northumberland. This is a lot. The omissions have to be repaid from the word-lists by the reader, with an effort.

An atlas will be judged by its maps. There is some less than excellent work here, most obvious in the clumsy handling of the Lateral shading, but also producing a list of misfortunes too long for this column. Economy should not persuade against the National Grid indices on every word-map (it appears only on the Key Map of Informants' locations which is not to the same scale, and also lacks the northern 1050 and the longitudinal line for the Shetland inset); or against same-scale presentation of the essential auxiliary maps and the main word-maps which have repeatedly to be compared (the Highland Line which ought to be drawn on every word-map appears only in a smaller-scale figure, and in Appendix D the most necessary "background" maps are either larger-scale than the main series or drawn to a different outline of Scotland); or against the provision of pull-out transparent sheet key-maps, etc, same-scale, for laying over the word-maps as needed. This would be a greater economy, saving the reader a fortune in tracing-paper and offset-litho.

For all that, it is a welcome, learned, patriotic, monumental Scottish book. It is an achievement, the end of a beginning in Scottish philology, a credit to all those men whose names are mentioned in it. It is a generous book in challenging the reader to dispute and giving him the information with which to do so. It is a veritable compendium of word-games. Volume two, please.

John McNeal Dodgson

A pronounced change in talking

Old English Phonology
by Roger Lass and John M. Anderson
Cambridge University Press, £10.25
ISBN 0 521 20331 X

By "phonology" in the title of this book is to be understood, of course, "generative phonology". The primary aim of the authors is to formulate rules which will generate synchronically the well-known phonemic alternations of Old English morphology and word-formation. However, such alternations are largely the result of changes in pronunciation that occurred in earlier stages of the language, though the pattern of each sound-change, in traditional thought at least, is likely to be observed by direct sound-changes, levelled by dialect borrowing. There is a temptation, however, to assimilate the synchronic rules of the rules of historical development established by traditional philological methods; and, although the authors state the distinction between the two very clearly in their preface, they do not always succeed in resisting the temptation in the body of the work.

In its extreme form the theory holds that the mental processes of the speaker recapitulate the historic developments to produce the necessary alternations, and that sound-change itself is the result of some sort of short-circuiting in the minds of the speakers so that the "rules" become disordered, perhaps as a result of a self-regulating system designed to achieve a simpler, and hence less costly (in terms of brainpower), set of rules. This does away

with the need to consider phonetic factors (in particular, the distinction between classed and unclassified vowels at the phonemic level—it is perhaps significant that Antonsen and Balthnick do not appear in the index), as well as the disturbing factors mentioned above. Thus, the secondary aim of the book is to provide a historical explanation of the phonetic explanation, that is "on the assumption that nasal retraction was at some point reordered to follow AFB and unlabial". This seems a level with the explanation that opium sends you to sleep because it possesses *virtus dormitiva*.

Again, "one of the more important changes that generative phonology has permitted us to make in the standard assumptions about historical change is the rejection of the meta-assumption about irreversibility." This is a curious reversal to pre-Saussurian linguistics; de Saussure's famous demonstration of the secondary nature of the Sanskrit vowel system depended just on the irreversibility of mergers. The authors use the freedom thus gained to suggest that there is no reason to suppose that the long and short diphthongs of OE "were phonetically different at all so long as their underlying representations remained stable." They seem to have a level with the explanation that opium sends you to sleep because it possesses *virtus dormitiva*.

C. A. Ladd

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Department of Linguistics
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The *Journal of Phonetics* publishes papers in all areas of phonetics which attempt to elucidate a theoretical problem. Hitherto phoneticians, lagging somewhat behind linguistics in general, have paid relatively little attention to research done within a theoretical framework. Now, however, phoneticians are beginning to establish coherent theories, to choose between different models and to produce testable hypotheses. This kind of theoretically-motivated approach is basic to the *Journal*.

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SPECIAL ITALIAN NUMBER

This week's issue of The Times Literary Supplement is essential reading for both teachers and students of Italian. Its pages are full of articles and reviews on Italian books and writing:

- Dennis Mack Smith on the life of Mussolini
Arnaldo Momigliano on Marxism and Ancient History
Leonardo Sciascia on Sicilian writers
Franco Fortini on recent Italian poetry
S. J. Woolf on Italian industrialism
also
Carlo Cipolla, D. S. Carne-Ross, Ignazio Silone
and Anthony Burgess

The Times Literary Supplement

Available from newsagents, price 15p.

Not multidisciplinary

The Concept of Structuralism: A Critical Analysis
by Philip Pettit
Gill and Macmillan, £4.95
ISBN 0 7171 0745 0

In his previous book, *On the Idea of Phenomenology* (1969) Pettit took Hume to task for his innocence of the role that language, a public medium, plays in the structuring of private experience. In this latest book, he turns his attention to the camp—structuralism—and asks how far its linguistic model can apply to disciplines other than language. He argues that structuralism has limits to its legitimate extension. While it can organize non-linguistic fields for semiological analysis, this analysis cannot, except occasionally at the price of triviality, constitute theory or science.

He excludes Foucault, Althusser, Lacan and in many respects Lévi-Strauss from the company of structuralists on the grounds that there is nothing in the field that each of their studies constitute ("archival", "ideology", "unconscious", "kinship systems", "mythology") that corresponds to the sentence in language. They lack the structural units that would allow the application of the linguistic model. Even if this were true, it might occur to the reader that the definition of structuralism being employed is over strict. The enthusiasms of French fashion can play funny tricks with one's critical faculties, but Dr Pettit did not exhaust his own considerable analytical powers when he dubbed them all anti-phenomenologists.

His book takes the form of a highly cross-referenced and well-documented argument tightly packed into four chapters. For Pettit, the attempt to apply a linguistic model of analysis outside language proper involves a choice between two different analytical strategies—synagogical and paradigmatic. A synagogical strategy analyses those rules of serial combination that allow us to identify elements by their relations to other elements with which they can be accurately combined. The paradigmatic strategy analyses the distinctive features of the elements in virtue of which element substitution can take place. Linguistics offers us structural phonology (which Lévi-Strauss takes up) as an example of a paradigmatic strategy, and two synagogical alternatives: generative syntax in

the style of Chomsky, and what Pettit calls "differential semantics"—a practical aid to literary analysis. He offers philosophical arguments of a sort for claiming that the generative-differential, synagogical-paradigmatic, contrastive-complementary rather than competitive in the study of language.

After a general viewing of the exchange of slogans that sometimes seem to constitute the substance of the structuralism-phenomenology debate, he works out a map of possible types of semiological analysis and theory—"straight" and systematic analysis, descriptive and generative theory. These then get tested on the literary, non-literary and non-linguistic fields for semiological analysis, this analysis cannot, except occasionally at the price of triviality, constitute theory or science.

The chapter on Lévi-Strauss while interesting is not really original, nor central to the argument. He does allow us to see, however, why the limits of his imagination are the only constraints under which Lévi-Strauss works.

The final chapter explains why structuralism, conceived of as a model, cannot achieve science outside linguistics. But his account of a model as a systematic metaphor (in Merleau-Ponty's sense) has to be filled out with an account of the conceptual level at which it operates (derived from Körner). The disappointment of structuralism applied outside language is that, analysed as such as it will, it cannot rise to the level of theory, because it cannot provide grounds for the repeatable identification of the units of analysis. Isolation of strings is always a one-off business, except at an uninteresting level of generality. That is why "there is an art of semiological analysis", never, in a strict sense, a science.

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David Wood

A linguistic philosophy

Principles of Firthian Linguistics
by T. F. Mitchell
Longman, £5.50
ISBN 0 582 52455 5

Whilst the 15 years since the death of J. R. Firth have seen a dramatic increase in activity in linguistics on several fronts, Firth's own approach and ideas have suffered an eclipse which, to those who remember the interest they once attracted, must seem hardly less dramatic. To many, certainly, it appears unwarranted. The object of the present book by one of Firth's sometime colleagues is, in part, to "remedy the underserved neglect and misunderstanding of Firthianism".

Firth's experience led him to a view of language essentially at variance with the structuralism of the thirties which he regarded as very imperfect in its theoretical bases. In his own approach to linguistic description as the statement of "meaning" at a series of congruent levels, a "text" will be regarded as a "constituent of a context of situation" in the context of a situation itself constituted by, as do collocation, syntax, phonology and so on. The details of Firth's "general theory" are perhaps more accessible than is sometimes thought, but it is unfortunate that on the one hand a considerable battery of technical language is built up, on the other a theoretical tenet that "there is no need to recognize indeterminacy in the technical language of description" excludes any "definition" of terms.

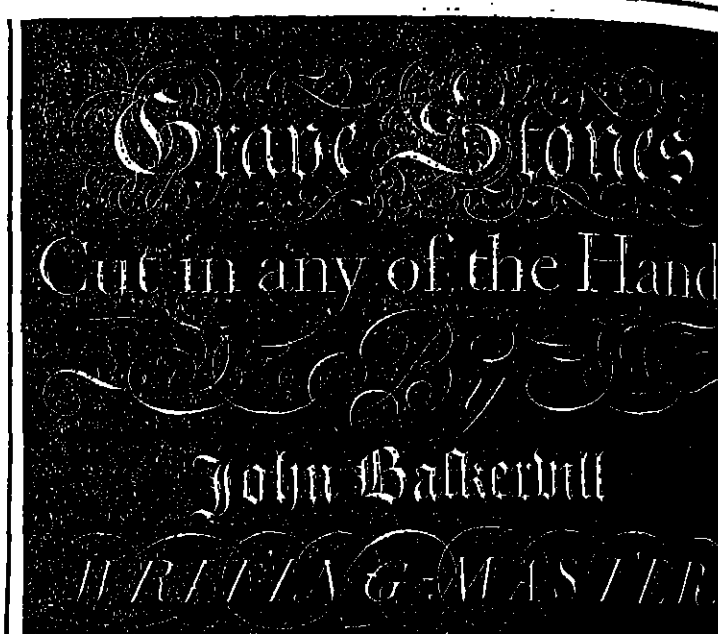
Moreover, various aspects of the theory remained for some long time elusive, and the last few years have seen a hard and fast lines can be drawn at present to form a strict classification for contexts of situation. For these reasons, among others, many attracted to Firthianism by its scope and humanity have been unable to embrace it fully. The intended reader must be advised that the content of the book is not wholly new. Of the seven sections, four are re-presentations of papers previously available to the linguistic public and published between 1957 and 1973. More importantly, there is a chapter on the wider exegesis of Firthian thought or of development or distillation of it. For various central notions, that of "level", for instance, which might remain obscure, the present book provides little help. The last two chapters of this kind is turned aside, though, by the author's description of the book as "not theoretically oriented" and his later recommendation that the interested reader should refer to recent writings on the subject.

Given these observations, we might be pardoned for questioning the *Principles* of the title. Firth himself, though, refers to his theoretical utterance as embodying "principles of analysis and synthesis" and it is such principles—though unidentified—that this volume sets out to exemplify. Features familiar to Firthian students are amply presented: close attention to phonetic detail, integration of texts with appropriate glosses, and consistent reference to the syntagmatic plane. Data are drawn from a wide range of languages.

The author seems to be particularly well suited to his task in that he is perhaps closer than most to Firth's own stance; for, for example, in the matter of the status of phonology as an interlevel between phonetics and grammar, a position taken up by the "Neo-Firthians", but not, it seems, by Mitchell nor by Firth.

Indeed, some of Firth's very personal and rather evocative phraseology has been adopted, without quotes and as a result, without the author's own style and cast of mind. Those already initiated into Firthianism may then find this book a disappointment; for others it could well suggest a revision or extension of their linguistic philosophies.

John Kelly



This slate slab was cut early in John Baskerville's career and was intended to act as an advertisement for his services. It had still not settled on a definitive spelling of his name. The slab, which was for display in a shop-window, is preserved in the Birmingham reference library, "John Baskerville of Birmingham: Letter-Founder and Printer", by F. E. Pardoe, published by Muller at £9.50.

No common ground

Problems of Language and Learning
edited by Alan Davies
Helmholtz, in association with
SSRC and SCRE, £3.00
ISBN 0 435 10190 0

The relationship between language development and learning presents a major challenge to psychologists, linguists and educators. The challenge comes at several levels and reflects not a single problem but a multitude of problems; the sheer difficulty of mounting the necessary multidisciplinary approach with the different vocabularies, methods of categorizing and types of explanation, the absence of any adequate theory to drive research, and often the inadequate specification of the problem to be addressed. This volume is a brave attempt to make inroads into a large and complex area.

Based on the first of two seminars organized by the Scottish Council for Research in Education and the Social Sciences Research Council in 1973 and 1974, the book is made up of five essays, two of which could best be described as theoretical and three as practical, though the overlap is extensive, and an edited account of discussions centred around the pre-circulated papers. The editor in a simple, sensible and straightforward introduction identifies three aims which it was hoped the first meeting would fulfil: it should provide some theoretical background to the relationship between language and learning; it should throw up suggestions for major practical applications which interested individuals could explore and it should reveal a research area or areas which the subsequent seminar could deal with in depth. These are formidable aspirations and on the whole we should not be too surprised that little which is staggeringly new concerning the first two objectives was attained: in respect of the third we must wait on the report of the second seminar.

In the first paper Halliday addresses himself to the question of how language events, culture, and "How does the child learn from the small changes of everyday speech the deeper patterns of the culture?"—a promethean task. The attempt to provide an overall view of the social conditions of language is heroic but not very successful; the principal discussion to the papers Crisp, wisely questions the assumption of any complete reflexion between language and society. In an elegantly written essay on the relationship between language and thought Bruner explores various possible links and points what he calls "analytic competence" which serves as a bridge between linguistic competence and communicative competence. At the end of

Bruner's chapter is a footnote to the effect that he changed his views and produced a revised paper which sadly we are not offered, instead the reader is referred to a copy abstract at the end of the book. It is rather unsatisfactory and detracts from the volume.

A paper by Spelot on child deals with Scottish English in a technical manner and in a way, commentary the discussion, how, draws out the importance of the linguistic factors in dialect. The areas of distribution of the terms of these that can be established as known to the speakers of the parent language are plotted on a map and he concludes "the home of the speakers may be determined from the region in which all [items] are to be found".

Hajdu then discusses possible connections between Uralian and other languages. There are a number of exceedingly ancient words common to Finito-Uralian and Indo-European (such as *honey*, *honey-drink*). It is not clear whether these are sufficient to prove relationship between Finito-Uralian and Indo-European. Until recently "applied linguistics", using the term to mean the application of linguistics to language teaching, concerned itself largely with the problems of the teacher and what he should be teaching. In view of the increased interest in problems of learning languages, it is hardly surprising that applied linguistics, still striving to prove that it is an autonomous subject (which I believe it is not), should also turn its attention to the learner rather than the teacher. The titles of the two books under review illustrate this trend but they are very different books, not only in format and layout, but also in content, emphasis and perspective.

Beninet's book owes a great deal to his earlier *Aspects of Language and Language Teaching* (1968) and is, in format, a traditional textbook. It attempts to take the reader right through the whole gamut of linguistics as applied to language teaching: from general remarks about language and language learning, via teaching aids, language varieties, linguistic theories, teaching methods and error analysis to linguistics and the teaching of literature.

The book attempts to be comprehensive and to give a unified picture of applied linguistic theory. In his preface the author remarks that the book is "the end of a long intellectual haul", and in many places the exhortations of that haul seem to have prevented the author from expressing his ideas clearly and explicitly. The often, the reader has to guess at what is implied in the author's exposition. There is no doubt that the necessity of using language to talk about language is one of the linguists' greatest obstacles in formalizing the objective facts of language (if there are any), but the reader cannot help feeling that the author is at times being choked by his own metalanguage. The "haul" will, I fear, be far too long and arduous for many potential readers.

There is a great deal of useful and carefully illustrated argument in this book and if the reader takes the time and trouble to do battle with the author's style he will be rewarded with an exposition of one kind of applied linguistics, illustrated by many examples from English, French and German. To derive any real benefit from this book, however, the reader will need a fair amount of background knowledge of both linguistics and language teaching.

Whereas Bennett attempts to give a unified picture of applied linguistics as an autonomous subject, the collection of readings edited by Oller and Richards does just the opposite: it presents the reader with the cut and thrust of different points of view about language and the way it is acquired. In many ways this gives a truer picture of the real situation in the world of applied linguistics. The seven sections of the book include articles by proponents of various attitudes to the subject. Chomsky's article (1965), for example, is followed by an article by Oller, specially written for this collection, which presents an entirely different point of view from that of Chomsky. The articles are well chosen and are linked by a unifying pragmatic theme as suggested by the subtitle.

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F. C. Stork

The Uralian family

Finito-Uralian Languages and Peoples
by F. Hajdu
translated and adapted by
G. F. Cushing
Andre Deutsch, £4.50
ISBN 0 233 96552 2

The title of this book is a misnomer. It should be entitled *Uralian Languages and Peoples*, since the Uralian family of languages comprises two sub-families, Finito-Uralian and Samoyede, and the author discusses both on equal terms. The misnomer is apparently deliberate, because on page 32 there is a half-hearted attempt to justify the use of the term *Finito-Uralian* in the sense of "Uralic" as a term which is American for Uralian.

The book may be described as a scholarly treatise intended for the general public. There is nothing difficult in it, though its subject-matter seems exotic. The introduction opens with a discussion of the history of Finito-Uralian philology. It is surprising how long ago the relationships were known—the relationship between Hungarian, Vogul and Ostyak is recorded by Ptolemy in 1405-64. There follows a somewhat sketchy general account of methods of determining linguistic relationship, and a few Uralian sound-changes are introduced.

Part one covers Finito-Uralian pre-history: the first point considered, in the author's customary cautious manner, is "the primeval home of the Finito-Uralian peoples". He attaches great importance to the evidence of the flora and fauna. The areas of distribution of the terms of these that can be established as known to the speakers of the parent language are plotted on a map and he concludes "the home of the speakers may be determined from the region in which all [items] are to be found".

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F. C. Stork

Precise linguistic abstractions

An Introduction to Systemic Linguistics, volume 1, Structures
by Margaret Barry
Batsford, £5.50 and £2.75
ISBN 0 7134 2902 X and 2903 8

Systemic Linguistics is the model of language still being developed by M. A. K. Halliday and other British linguists, which was known in its earlier stages in the 1960s as scale and category grammar or neo-Firthian linguistics since it owed much to the ideas of J. R. Firth. Its descriptive emphasis has been on a framework of levels in language structure and a major concern has been the synthesis of structural and functional approaches to language.

It was over ten years ago that the first broadly-outlined account of systemic theory intended for a more general readership was published in *The Linguistic Sciences and Language Teaching* by Halliday, McIntosh and Stevens. Since then systemic writings have considerably developed the theory and a variety of applications of it have been made. One need only enumerate the topics of a few of the major publications to show something of the extent of the

development: the work on creativity and theme, and on intonation and its relationship with grammar; the fullest account to date of the grammar of scientific English; a generative systemic grammar of a substantial area of English. Systemic descriptions have been applied to aspects of child socialization and to language acquisition, and teachers of English or all levels have been influenced by the work of the systemic-based Schools Council programme in Linguistics and English. The first of these schools have been introduced to a version of systemic grammar, with the help of the three teaching grammars of English that have appeared, but none of these has dealt in detail with the theoretical framework on which the descriptions rely.

Clearly, in view of this considerable activity and development, and since some of the theoretical publications are relatively inaccessible and inevitably difficult, an up-to-date exposition of systemic theory, drawing together the main threads of the somewhat diversified theory, could be a valuable addition to the very limited range of published material suitable for less advanced students.

Miss Barry's book is intended for such students in English depart-

ments of universities and colleges of education. It is not to be seen as a direct contribution to systemic theory, for the author modestly disclaims any originality in the book and apologises if she has in any way misrepresented other people's ideas in her attempt to make them "easily intelligible to people who have little or no prior knowledge of linguistics".

Some references are made to other schools of linguistics in the opening chapters but—reasonably enough in such a book—the author does not set out to evaluate the systemic model against these, although some of the main distinguishing features are indicated.

A succinct account of the systemic levels and interlevels of language is followed by the two main sections of this volume. The first of these is a detailed and well-illustrated account of the systemic view of structure, together with the related concepts of unit and rank. Miss Barry defends this way of ordering her material as being more helpful to readers in that they should find the structural descriptions more akin to any previous grammatical work they have done. The other main section deals with the major concept of systemic theory—system, a term embracing the paradigmatic options available at the various

levels. This lucid exposition is based primarily on Halliday's *Notes on Transitivity and Theme* but it takes account of later work by Halliday and others, some of which is unpublished.

The second volume, subtitled "Levels and Links", will deal more fully with levels other than the grammatical and with the important issue of the relationships between the levels. Although the book is not likely to be easy reading for its intended public, it probably makes as many concessions to the reader as are consistent with a comprehensive and accurate account of the subject. Miss Barry understands well the difficulties that the student reader is likely to encounter. She repeatedly summarizes and prefers to use helpful examples rather than definitions. Where definitions are used she warns the reader when they are "of the helpful but inaccurate kind".

The student who has worked conscientiously through the book, preferably with help, will have had more than a good introduction to systemics; he will have had considerable practice in thinking with some precision about linguistic abstractions.

K. A. J. Yerrill

Do not write in jargon

Applied Linguistics and Language Learning
by W. A. Bennett
Hutchinson Educational, £5.75
ISBN 120930 7

Focus on the Learner: Pragmatic Perspectives for the Language Teacher
edited by John W. Oller and Jack C. Richards
Newbury House Publishers Inc, £5.50
ISBN 012066 63 6

Linguists recently have been paying a great deal of attention to problems of language acquisition and processes of language learning, partly in an endeavour to gain further insight into the nature and structure of language and partly to bring the findings of linguistic science to bear upon a field full of conflicting ideas and ideologies. Until recently "applied linguistics", using the term to mean the application of linguistics to language teaching, concerned itself largely with the problems of the teacher and what he should be teaching. In view of the increased interest in problems of learning languages, it is hardly surprising that applied linguistics, still striving to prove that it is an autonomous subject (which I believe it is not), should also turn its attention to the learner rather than the teacher. The titles of the two books under review illustrate this trend but they are very different books, not only in format and layout, but also in content, emphasis and perspective.

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F. C. Stork

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Allen B. Veaner, director of bibliographic services, Stanford University Libraries and editor in chief "Microform Review", begins this supplement on microfilm with an article on microfilm techniques in American higher education, explaining the history of microforms. He also examines the characteristics, advantages and disadvantages of microforms and their future in the academic community.

In pursuit of an optical grail

Microphotography was originated by a distinguished English instrument maker, John Benjamin Dancer, in 1839, and developed by him to a high degree of technical perfection in 1850s. The suggestion of employing this new technique for educational and research purposes followed almost immediately, when in 1853 Sir J. W. Herschel urged the use of the new medium for the publication of scholarly and reference works, such as encyclopaedias, atlases, and logarithmic tables.

Despite Herschel's brilliant and singularly foresighted suggestion, microfilm remained but a novelty for decades. Early in the twentieth century, a few pioneers had exploited its potential by reducing to miniature form manuscripts in archives.

Practical microphotography became a possibility after 1925—the year when amateur 35mm photo-

graphy became a reality with the introduction of the compact, precision Leica camera. Within 10 years, large scale high production apparatus had been developed by the major photographic manufacturers, especially Kodak, which became a leader in the field. It was therefore not until the mid-1930s—90 years after Herschel's work had been published—that microfilming could begin to be of practical service to higher education on a large scale.

One of the first really significant events in micropublishing occurred about 1936, when Recordak (a subsidiary of Kodak created expressly for marketing its microfilm services) made available on 35mm microfilm the complete *New York Times* from 1914 to 1918.

The value of micropublishing newspapers was recognized immediately by the academic community, whose members could not have been fond of working with huge bound volumes of deteriorating newsprint. Harvard University Library in 1938 organized its Foreign Newspaper Microfilm Project, which was to revolutionize the distribution, storage, and use of foreign newspapers in research libraries. This project eventually became a routine programme

administered by the (US) Association of Research Libraries.

In the same year, the first modern micropublisher, University Microfilms, was founded. The firm announced its intention to microfilm every English language imprint from 1475 to 1640—a vast project which is still under way.

Since these early days hundreds of thousands of perhaps millions of books, journals, diaries, archives, scrapbooks, manuscripts, newspapers—even the specimens of several herbaria—have been micropublished and made available to scholars and libraries throughout the world.

Technological developments continue apace. In the late 1960s and early 1970s there appeared the ultrafiche—a microform in the shape of a small, oblong, transparent card containing up to 3,000 images reduced to pictures as small as those of a postage stamp.

Yet the practicality of high reductions for ordinary academic usage is coming into question for many reasons, not the least of them serious deficiencies in some portable reading equipment and failure to take into account such factors as the reading and research process.

Unattainable fantasy

It seems that technicians and marketing managers were talking largely to themselves but not to actual and potential users of high reduction systems. In fact, low to moderate reductions have proven beyond all doubt their enormous suitability for source materials intended for the educational market, and it is very doubtful whether these ultrafiche will ever achieve wide popularity, unless certain critical optical, mechanical, and indexing problems are solved.

Herschel's pocket encyclopaedia indeed remains the unattainable fantasy.

What is a microform? A highly reduced photographic image, usually of text, which requires an optical device in order to be read. Like computer tapes, microforms have been called by some an "invisible product", because they cannot be used without equipment.

Microforms exist in two basic formats: long strips of perforated 16mm or 35mm film wound on 30 meter rolls or flat sheets of film (105mm by 148mm) typically carrying seven rows of 14 images, 98 in all. (There is a third format carrying but a single image mounted in a computer tabulating card, but this format is "exploited" almost exclusively in industrial and defence applications.) Images may be positive or negative (white text on black background) but the question of which is superior is probably not resolvable; each has its adherents.

Today, a galaxy of expensive, high precision equipment is essential to produce high quality microforms, particularly from very small type fonts. Yet the microform is the "trappings of technology at one's command, capturing on microfilm the delicate nuances of the author's hand in a manuscript is still considered more an art than a science.

In any event, creating microforms from retrospective publications remains an extremely labour-intensive activity. Occasionally one runs across schemes to microfilm all the books in the Library of Congress or the British Museum. The suggestion has even been made to make available the contents of the Harvard University Library anywhere in the world for \$15 per volume. All such far-fetched schemes overlook the heavy labour costs incurred in creating microforms from inkprint copy.

The costs to undertake such massive projects at today's prices (on the order of \$16 per exposure from bound volumes), foredoom these ventures, none of which can be taken seriously as they would run into the tens and hundreds of millions of dollars.

Essential as they are, microforms are very numerous but somewhat of the dead end of substantial conflicts according to the vested interests of various parties, eg. copyright owner v. educators, library administrators v. library patrons, convenience of use v. service by post and binding costs.

Not all is positive and negative, however. Microforms are being seriously misused to regard the microform as anything other than a mixed blessing (some might say curse).

Seven types of microform may be produced, each with its own significance for the educational community.

● **Space saving**—a consideration for the administrator, but one of generally little interest to the patron. Reducing voluminous sets of journals from a library's backstock

can free space for current imprints but is likely to cause an uncomfortable shudder among historians.

● **Reduction of binding costs**—a factor of increasing importance as the costs of labour and materials for binding escalate. Savings are partially offset by the need to buy and maintain special reading equipment and to staff the microform collections.

● **Preservation**—to extend the life of materials printed on highly transitory media, e.g. newspaper and other wood-pulp papers; to reduce the wear and tear on fragile originals by making available accurately reproduced substitutes.

● **On demand copying**—to disseminate selectively part or all of a corpus of material to any part of the world, where it may be consulted in the privacy of home or office and without the expense or inconvenience of travel to distant points.

● **On demand copying** may also be employed to produce full-size, bound facsimiles one off from suitably prepared microforms by means of Xerox Copyflo(R) equipment—a type of service which has been commercially available for nearly 20 years.

● **Micropublishing**—to make available multiple copies of collections otherwise impossible to obtain or which are not marketable in hard copy. By means of its "collective capability", micropublishing can bring together into a single corpus related materials from a diversity of sources.

● **Continuous revision of data bases** through computer-generated microforms, to produce promptly and regularly continuously updated files of comprehensive data bases, such as financial, personnel, census, or bibliographic data. Such data in microform consume substantially less space than their paper computer parts, and are relatively easy to store and transport. When issued with well designed, computer produced indexes in hard copy, such files may be more convenient to use than paper.

● **Comparative inexpensiveness of dissemination** to make large quantities of material available cheaply. For example, the average price per title in the Kress-Goldsmith collection is only 60p.

The disadvantages of microforms are strikingly self-evident. Yet in the face of well organized promotional campaigns, the scholar or student may be too embarrassed to point out what would be clear to any child.

One cannot annotate microforms. Comparison of texts—surely the keystone of much scholarly research—is all but impossible.

The patron is totally dependent upon machines, many of which have hardly been designed with academic use in mind and some of which lack the most obvious attention to human factors.

While a book can be used (and carried) almost anywhere and read in any convenient position, microforms generally cannot.

Microforms are characterized by a somewhat greater degree of fragility than books and small images are susceptible to damage by scratching from improper handling or use on poorly maintained equipment.

Many microforms are so seriously lacking in elementary bibliographic control and do not even have the most primitive indexing that it is all but impossible to determine their existence, or if once obtained, find quickly the exact item of interest.

Browsing impossible

Because they comprise so many "look alike" objects, files of microforms are expensive to maintain. If complete confusion is to be avoided, there is little possibility of self-service in large microform collections.

Finally, it is practically impossible to browse through microform collections as one browses through a collection of books.

The rising cost of typesetting has now led some publishers to microfilm lengthy books, and to produce an author's manuscript and reproduce the results as microfiche inserted in a pocket affixed to the book. Similarly, wherever the editing process has been computerized and text is available in machine-readable form, it is possible to bypass paper completely and issue computer-generated microfiche, several of which may constitute the "book" itself.

The transparent microfiche is rapidly gaining ascendancy over the once very popular "microopaque" form, chiefly because of the inherent superiority of its display

section systems over their opaque counterparts. Yet robbing cinema to illuminate certain "reference" collections, such as newspapers or long runs of journals and many scripts, where integrity of the sequence is mandatory.

Simultaneous publication of a large body of material on microfilm along with a detailed and carefully integrated hard copy index is a complex area of government departments. This is an indication of the micropublishing industry's last best hope of survival.

Publication of material in this form is sufficient. "Software" must assure the whole to provide an efficient key to its content.

Uncertainties as to how copyright legislation will finally deal with microfilm continue to hold back application of much needed microfilm technology.

Microfilm technology is radically altering the pattern of disseminating graphic information. At the same time, the economics of publishing are being altered. The cost of microfilm is not a penny a rising sea, but the economics of publishing are being altered. The cost of microfilm is not a penny a rising sea, but the economics of publishing are being altered.

In the technical area, one can note that colour microforms have come down in price and are now being used in a wide range of applications, particularly in programmes of social and medical education.

Performance failure

The recent advances in manufacturing lightweight, cheap microfilm reading machines are not sufficient to offset the fact that these machines are easily portable but are still only for microfiche, not roll film.

Throughout its history in higher education, the microform has been afflicted with a malaise familiar to computer users: the failure to promise what it can deliver. Although very significant progress has been made in solving problems, the distance between prospect and reality in microform utilization seems almost insurmountable.

Part of the problem may be attributed to the fact that the microform and developers of microform equipment and systems rarely depend upon their own production of copies on demand; many of them are capable of decentralized operation using unskilled operators at user points, while one—microform reproduction—adds to all of these the advantages and disadvantages of microfilmization.

Microform technology (increasingly referred to as micrographics) has its origins in the early development in photography which took place in the first half of the nineteenth century. Initially, and then not until the First World War, high speed photography was limited to the preservation of rare items. In the 1930s the advantages of microforms for reissuing scholarly material in quantities too limited to justify printing were exploited by a number of entrepreneurs and micropublishing proper was born.

Since then, if the micropublishing industry has failed to live up to the predictions for the near total miniaturization of our scholarly libraries made by Fremont Rider in 1944, it has grown consistently and steadily during a time when conventional publishing was in a state of stagnation. Now with conventional publishing in difficulties, the micropublishing industry in Britain is beginning to achieve an annual growth of between 25 per cent (United States Department of Commerce) and 40 per cent (G. G. Baker and Associates). The total market remains as yet small compared with conventional publishing, but it is growing rapidly.

The traditional micropublishing medium is 35mm roll film. It is still widely used for retrospectively publishing (including the *Times Higher Education Supplement*) and some forward-looking, where its relatively low reduction ratio, its well suited to large or difficult originals.

For more straightforward material there is an increased tendency to use 16mm roll film. The smaller size is associated with more modern, less expensive reader equipment and offers increased scope for cassette or cartridge loading, an advantage somewhat offset by the industry's belated move towards cassette and cartridge standardization—no micrographic company apparently possessed the foresight exhibited by Philips in the audio-tape field.



Not merely a smaller kind of book

Bernard Williams

When we come to view the mid-1970s in retrospect it may be seen as the time when major changes in the way information is published and distributed began to take place. As in many similar situations, the technology to realize such changes became available much earlier and initially seemed unlikely to affect the monolith of traditional publishing to any significant degree.

It may well be, however, that the present problems of traditional publishing—compounded of rising production and postal costs as well as demand reduced by the economic recession—linked to the increasing use of newer methods of multiplying the written word will provide a catalyst producing major changes in the patterns of publishing and information dissemination.

For centuries printing has remained unchanged as the sole method of multiplying the written word; the assumptions of printing technology have provided the cornerstone for the publishing industry, the way in which information is presented, and for the world's copyright system.

That classical situation is now changing rapidly: printing—a specialized and therefore necessarily centralized process—is increasingly affected by competition from newer multiplication technologies. Most of the newer technologies replace the pre-printed edition by the production of copies on demand; many of them are capable of decentralized operation using unskilled operators at user points, while one—microform reproduction—adds to all of these the advantages and disadvantages of microfilmization.

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Illustrations made from microfiche editions.

Original micropublishing denotes another new segment of the business where the microform version is the only version published.

Advantages over simultaneous publishing reside in the fact that the publication can be arranged specifically to suit the characteristics of microfiche while concern about the effects of competing versions are avoided. A notable example of original micropublishing is provided by the *British Library's Books in English* publication issued on high reduction microfiche.

Utility micropublishing scarcely qualifies as publishing proper since it is concerned with the distribution of already published material, usually within an organization, of parts lists, service manual and similar data. Microforms (usually microfiche or cassetted 16mm roll film) are now widely used by motor manufacturers, airlines and public utilities for distributing information to agents or to service men. Utility micropublishing is the more attractive area for equipment manufacturers because it provides the source of large single orders, sometimes running into thousands of units, for reading equipment.

The newest area involving micropublishing is concerned with the combining of conventional and micropublishing techniques to provide completely new information packages. One aspect is exemplified by the *synoptic journal*.

The idea here is that with specialized journal publication becoming increasingly marginal the needs of individual users could be met more economically by a journal containing substantially shortened articles or synopses. The synoptic journal would then be backed up by the full text on microfiche (or alternatively microfilm) available on demand from appropriate libraries or the original publisher. The Chemical Society is one organization which recently announced its intention of publishing a number of synoptic journals.

Micropublishing is not without its own quota of problems. In a business ultimately dependent on the provision of low cost reading equipment, inadequate priority is attached to standardization and, equally important, to stabilizing standards over a reasonable span of time. Quality control in the production of microforms is sometimes lacking—like the wartime black market sardines which were not intended to be eaten one sometimes gets the impression that producers do not anticipate that microforms will be read.

Microforms have also suffered from the assumption that they are simply miniaturized versions of conventional publications—the fact that they need significantly different treatment in both typography and general presentation is being belatedly recognised.

The National Reprographic Centre for Documentation has been very active in specifying both the bibliographic requirements of the media and the technical requirements of reading equipment. We still need to know much more about the fundamentals of reading from screen images.

As one of the media easily duplicated or printed out on demand, microforms pose many problems for a copyright law that is based on the assumptions of printing technology—if the principles of intellectual copyright are to be preserved the mechanism will have to be drastically changed to cope with modern dissemination technology.

Traditionally, the case for microforms has been based on the trading of certain obvious advantages in the storing and distribution of information against some marked disadvantages, compared with the printed page, at the moment of reading. With improvements in the equipment, media and presentation the gap in acceptability is tending to narrow. It may conceivably narrow much further if early evidence that children read as readily from screens as from books continues to accumulate.

The author is director of the National Reprographic Centre for Documentation, Hatfield Polytechnic.

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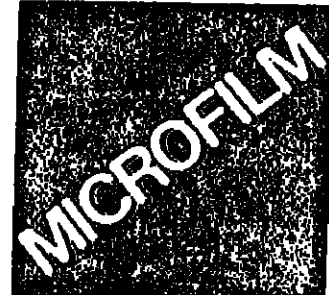
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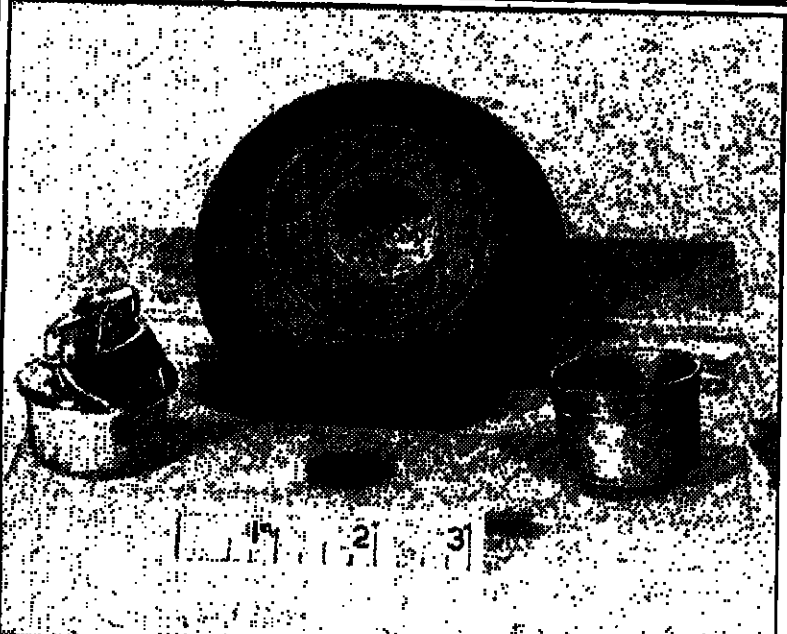
Dotting their spies

Microdots (microscopic photographic copies of espionage messages) are periodically mentioned in the media, and it is easy for the layman to form the incorrect impression that the making of microdots is very new and terribly secret.

For fun or for motives that can only be guessed, men have for centuries made miniature inscriptions. In 1481, a monk wrote 14 verses of St John's Gospel in a circle smaller than a half-penny. In his book, *Micrographia* (1664), Robert Hooke described the appearance of such miniature writing seen through the microscope, and suggested its use for furtive communication if it could be made easier and clearer. With his micropantograph, Peters (a London banker) in the 1850s used a diamond chip to make legible characters one-tenth of an inch high on glass. His machine (in working order) is in the Museum of the History of Science in Oxford, and the compactness of its writing was described in units of Bibles per square inch.

But even while the Peters machine was being made, Scott Archer evolved his almost grainless wet collodion plate, and Dancer and other British microscopists used it to produce microscopic copies of a whole book page. Their method was to make a somewhat reduced photographic copy of the page, and then use from this a reversed microscope to project a truly microscopic image on the plate. In modern parlance, they made a microfilm of a microfilm.

With even better reason than Books, Sir David Brewster appreciated their potential for concealment, and in the *Encyclopaedia Britannica* (1857) wrote that microphotographic messages could be hidden in an ink blot or a full stop. Commercial production of minute copies of texts and engravings started in England and France,



Left: above, Peter and Helen Kroger, convicted spies; below, table-top light and torch with false bottoms used by them. Right: above, microdots found in envelope in Mrs Kroger's handbag (enlarged approximately 13 times); below, enlargement of one microdot.

and the results were sold as curios or for recreation. Secrecy was nonexistent, since working methods for making the images were published, and special cameras were openly sold for the purpose.

However, these early developments were soon forgotten, and in 1946 a sensation occurred when the head of the Federal Bureau of Investigation published the discovery of German espionage microdots. These were the size of a full stop, and a hypodermic needle was used to cut out minute discs of film and plant them exactly positioned in paper. In fact, the microdots were camouflaged in the gutters of dots forming lines on a telegram form or the pattern decorating the inside of an airmail envelope. So effective was this method of concealment that it was expected to avoid detection even on wartime censorship of mail.

Other nations have also used microdots. In Britain and Atomic Energy 1939-45, Margaret Gowing related how Danish Resistance transmitted a microdot containing a personal letter from Professor (later Sir John) Cockcroft to Professor Niels Bohr. As a consequence, this leading nuclear physicist came to help in the Manhattan Project. For the British public, a memorable example was the microdot found in the Krogers' house at Ruislip in 1961 and shown at the Old Bailey during the Portland espionage trial. But these cloak and dagger stories are rarely considered by thousands of commercial and industrial workers for whom microphotography is an indispensable daily working tool. From the 1860s, production of curios can be directly traced to Hegon's development of the process for mass production of the messages flown into Paris during the Franco-Prussian War (1870-71). For some months it was the only means by which the be-

sieged city received news from unoccupied France. This was the first major application of microphotography to the solution of a human predicament, and the precursor of the microfilm industry.

In his 1857 article, Brewster also discussed the use of Dancer's process to make scales for eyepieces and other optical components of scientific instruments. Manufacture soon started in Germany and Austria, and in 1915 the Allies found they were without the means of making the gratings needed to replace gun sights smashed on the Western Front. The British optical industry made up for this deficiency, but on the basis of the use of producing its own emulsion and sensitizing its own plates.

In 1940, photographic manufacturers started to sell plates suitable for this work and they were widely used for manufacture of gun and bomb sights in the Second World War. Application soon extended to the production of coded scales for self-reading instruments, and the

making of metrology gauges and feed-back systems for numerical spreading control. With the spread of photography, the spread of the publication of a definitive text: Microphotography.

But events took a surprising turn and technology experienced what can now be seen as a significant quantum jump. Military interest in the microfilm industry led to the perfection of a family of "photoresists" possessing extraordinary chemical resistance, even when present in ultra-thin layers. At the same time, the needs of airborne electronics and computers caused the electronics industry to pursue a vigorous programme for the miniaturization of equipment. This work was accelerated in the United States by the news of the launching of the Soviet Sputnik Satellite and within four years the first integrated circuits appeared.

The production of integrated circuits is so complex to explain fully here, but it depends absolutely on the multi-stage application of two photographic processes. Each stage involves the production of a complex pattern, which is reproduced many times at minute size to fill the area of plate. The composite image is then printed on photoresist coated on a silicon slice, and is processed to form a stencil. Subsequent chemical and heat treatments cause the electrical properties of the silicon to be modified in the pattern controlled by the stencil. The design of the patterns in several superimposed layers causes the same cycle of operations to produce transistors, diodes, resistors and capacitors and their interconnections in the silicon. These processes depend on the mass production of images of microdot fineness, and are intensively used to manufacture circuits for television, communication systems, quartz watches, pocket calculators and computers.

In addition to the reduction of weight, integrated circuits offered other advantages. They were extraordinarily reliable, largely because the number of soldered joints was drastically reduced. In computers, they were able to handle high frequency signals because of the reduced distance which impulses had to travel. In addition, costs were lowered.

It is interesting that the integrated circuit (IC) is a result of the merging of two major technologies of the age, namely photography and electronics. In many ways, ICs affect the life of the man in the street. They facilitate airport traffic control and satellite relayed transmission of television programmes. Involvement in computer and space projects is having a major effect on future job prospects. Even the school children are not left out. Today it is argued whether they can take pocket calculators into their examinations. Tomorrow may call into question the need for much of the arithmetic taught today.

The author, an authority on microfilm communication, must remain anonymous for commercial reasons.



Packing them in the library

J.H. Lamble

The conventional concept of the role of microfilm in libraries was almost entirely concentrated on its space-saving capabilities and revolved around the 35mm reel and clumsy reading equipment that did more to discourage than encourage its use; the equipment manufacturers do not appear to have had much interest in the needs of libraries as a potential market.

As a result it is difficult to find a librarian, or indeed a library user, who has any great enthusiasm for the medium. The advantages of space-saving were further cancelled out when the collection of microfilm had to be made available to a large number of users at the same time who then occupied more space in reading the microfilm than they would have reading a book.

The developments of the past few years, however, in 16mm film and fiche and computer output microfilm (COM) have led to the microfilm industry being able to develop systems for the storage and retrieval

of information which, although designed for a commercial market, do have a potential in the educational field. A few simple experiments have been tried at Bath University which, although carried out on a very limited scale, have been encouraging both from the point of view of acceptance by the student in reading aids. (Commercial teaching machines of the 1950s used microfilm of course, albeit 35mm reels).

The equipment used is a planetary 16mm camera (which is extremely simple to operate); a reader-filler to convert the film into microfiche by jacking; and a diazo duplicator to produce copies of the fiche as and when desired. This equipment was obtained when the new library building was commissioned and, while its first use was considered to be in the conventional archival storage role of microfilm, we have continually sought other ways to exploit it.

There has always been a close link between the library and the educational technology effort in the university so that it was natural to consider the potential use of microfilm in teaching aids. (Commercial teaching machines of the 1950s used microfilm of course, albeit 35mm reels).

A first examination showed the following three potential uses:

● Study packs: particularly in subject areas within the social sciences where there is heavy dependence on background reading. While it smacks of spoon-feeding the student there are many advantages to assembling copies of the assigned reading to a specific topic in one package. There are, of course, disadvantages due to the copyright position which have prevented a full study of this as yet, but the economic factors are straightforward—60 pages of xeroxing would cost about £1.50; 60 pages of jacketed microfilm about 60p (including labour and a copy of that microfilm about 5p).

● The recording of complicated visual material used in a lecture situation to which the student can refer to afterwards. As an example of this we have microfilmed and jacketed a sequence of some 20 overhead transparencies used by a lecturer in che-

mical engineering in his lectures on the flow of compressible fluids and which, inescapably, contain more information than the ideal for that medium. Incidentally, in this connection, microfiche readers are now being produced which can be used as projectors quite suitably for small groups; this could have benefits for those lecturers accustomed to having to carry around a sequence of slides in order and the right way up.

● The creation of a package of notes on a particular topic intermingled with extracts from the literature which we hope will combine two functions: an advancement in the student's knowledge of that particular topic and at the same time an increase in his awareness (and hopefully his utilization) of the literature of his discipline.

There has been dissatisfaction for some time with the status and effectiveness of instruction to undergraduates in the techniques of information seeking and handling. A theory exists that this instruction is more effective if integrated with the actual subject tuition: the motivation of the student to acquire the skills of information retrieval is increased by the demonstration of its relevance to his studies. Although the programme could only be read on machines not normally found in a student's possession it was interesting to find that all of the students involved wished to purchase a copy for permanent retention.

Of course one has to overcome the reluctance to use microfilm as well as overcome the reluctance to use audio-visual aids that still exists on the part of many lecturers. One advantage at Bath is that the library catalogue has been automated for some time and extensive studies were made of the acceptability and efficiency of different forms of output compared with the conventional card catalogue. Both types of microfilm output—fiche and film—formed well enough so that the catalogue can now only be consulted in microfilm. Use of the catalogue has since increased and much of the mystery has disappeared from the medium.

The author is the Librarian of Bath University.

Resistance combat centre

Patricia Santinelli

Lack of standards in microforms, user resistance, and poorly designed and expensive equipment were all factors which motivated the development of the National Reprographic Centre for Documentation at Bathfield Polytechnic as a national information and advisory centre.

The idea of a centre concerned with the applications and technology of micrographic, reprographic and other new media for documentation is a very important advice independent of commercial factors originated by a research project under the former director, Dr Gordon Wright, became firmly established in 1967, under the terms of a research grant from the Office for Scientific and Technical Information.

The centre operates under the guidance of a small advisory committee and now has 800 subscribers, a number which has increased at a rate of 10 per cent a year.

One of the centre's earliest priorities was standardizing and improving reading equipment and it was quickly begun to test and evaluate equipment already on the market in order to develop some idea of the need to improve the design of the equipment. In those days, for example, were much better and had to be viewed in darkened rooms.

Microform reading equipment has now reached a stage where one can see any radical improvements in the design of the equipment. In fact, there have been no great breakthroughs, just developments such as the use of the quartz halogen lamp, instead of the tungsten.

All signs indicate that microform manufacturers have taken notice of the aspect of the centre's work and they are willing to submit their equipment for evaluation—even if the evaluation is a simple one.

escape the net since NRCD only evaluates a percentage of what is on the market and each piece of equipment takes one month to be tested.

However, it is clear that the full technical reports have encouraged manufacturers to produce cheaper, lighter, longer lasting and easily operated equipment.

Equally successful is the annual programme of short courses on micrographics, computer output microfilm, graphics and offset, and library micrographics, which normally attracts about 200 applicants every year. The courses are organized by Mr Tony Hampshire, a senior lecturer in reprography at Bathfield Polytechnic and member of NRCD including the director all participate in lecturing.

"We like our courses to be informal and find it better to deal with small groups," said one member of the staff. "We decided not to run one-day courses, simply because they do not provide sufficient contact with the staff, nor can we effectively help them in the time available."

Normally the centre runs three or four courses a term but micrographics which is very popular is covered 10 to 12 times a year. This particular course is divided in two parts: theory and practice and theory by itself.

"Originally there was only one course in micrographics, but it was far too general and did not fulfil individual needs so we decided to change it," Mr Williams explained. Basically the course aims to provide a broad coverage of microfilm systems, media, techniques and hardware, and the design of systems for technical drawings. Business records and micropublishing are covered as well. Practical and demonstration sessions are included. In addition, quality control criteria are explained and techniques demonstrated. Finally, computer output microfilm (COM) systems are analysed.

NRCD work also includes a well established programme of research and, where appropriate, projects are contracted to other organizations. All research grants come from the British Library, so the centre has to "sell" the projects to them before it can go ahead. Approximately £20,000 a year is made available but by no means all of it is taken.

Some projects are purely technical, such as the investigation on the usage life of silver halide films. The archival quality of silver halide films has already been proved but there is some controversy over this particular use of diazo film. Research so far indicates that this type of film will fade and therefore does not have archival quality.

Another project which is due to take until January is being undertaken jointly by NRCD and the readability of Print Unit at the Royal College of Art. It is mainly concerned with identifying the typographic and ergonomic factors significant in the design and presentation of microfilm information; the project is particularly designed to determine the methodology for further research.

The crisis in publishing forms yet another project on which the centre is working, together with the universities of Leicester and Sheffield. The project is divided into three parts: a survey of monograph publishing; a survey of learned journals publishing and a survey of the alternatives to conventional publishing as they affect the consumer; for example, looking at microforms, and new ways of publishing, such as synoptic journals.

Another area which concerns the centre is the maintenance or developments of standards. Talking about microfiche, Mr Williams said that the kind which originated from the USA was of bad quality both technically and in terms of content.

Mr Williams pointed out that the definite advantages of microfiche were very clear. It was so cheap that you could afford to use large size type illustrations could be put on the same page or opposite; it made possible obtaining information from the other end of the world almost immediately instead of waiting for six months for the original paper to turn up. He added that microfiche was also more economical than 35 or 16mm roll film when microfilming a single book since 98 pages could be got onto a normal fiche at a cost of only 5p.

In spite of these boasts the centre believes that user resistance is still very high. On the whole it is due to bad experience begun although commercial publishers have high standards, institutions are still lagging behind.

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Microform guides

International Microforms in Print. 1974/1975. A guide to microforms of non-United States micropublishers. Edited by Allen B. Veaner and Alan M. Meckler. About 6,750 entries list monographs, journals, newspapers, government publications and different kinds of archival material available from non-United States publishers and agencies. Paper. £3.75

Microform Market Place 1974/1975

An international directory of micropublishing. Edited by Allen B. Veaner and Alan M. Meckler. The main section contains an alphabetical list of some 375 organizations that sell microform titles and offer reprographic services and provides detailed information, including microform programmes and subject areas covered. Paper. £3.75

Microforms in Libraries. A reader. Edited by Albert James Diaz. A wide variety of articles appear under the following headings: Introduction to Microforms; Organizing the Microform Collection; Bibliographic Control; Applications; Standards and Specifications; and User Relations. Cloth. £8.95

Mansell
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Using it in the university

John Teague

When one considers that a piece of film five centimetres square can hold a reproduction of the whole of the Bible—all 773,747 words of it—or of Beethoven's Symphonies, one to nine, one can see the relevance of micro-techniques to space starved university libraries. Microfilm is, however, just one format in which all types of information sources can be made available.

In order to attempt to fulfil their overriding function of supporting the teaching and research of their universities, librarians need to acquire and make available for use books, periodicals, unpublished material, and collections of data, in whatever format is most readily available, convenient to the user and suitable for retention. Microfilm is not always the most convenient way of storing information for scholars, nor is it always the most acceptable to our readers, but there are very good reasons for its increasing adoption.

Although the wider claims of non-librarian microphotography enthusiasts have never been matched in reality, it is true to say that university librarians have been

active in the affairs of the Microfilm Association of Great Britain from its inception.

The idea of such a national association had first been put forward in the 1930s and the 1936 Library Association Conference discussed microphotography in libraries. Pioneers of its use were B. S. Page, then keeper of the Brotherton Library, University of Leeds, Dr Leonard Sayce, CBE, the then director of the Light Division National Physical Laboratory and E. F. Patterson, then deputy librarian, University of Newcastle-upon-Tyne. Mr L. L. Ardern, who has recently retired from his appointment as deputy librarian, University of Stirling, has been a staunch but realistic advocate of microforms in libraries for many years.

With such advocacy, one could reasonably expect microforms to represent a larger proportion of university library stock than they do at present. This proportion is not known for university libraries in this country, but was probably an over-estimate put forward 28 microforms for every 100 books in US university libraries. The proportion is certainly much lower in Britain.

There is at present in existence a working party of the University Grants Committee devoted to consideration of capital provision for libraries. Under the chairmanship of Professor R. J. C. Atkinson and including in its membership two university librarians, the working party obviously has within its remit the question of microforms in university libraries.

With emphasis on space saving the working party will, among other things, concern itself with gathering information on how much material in microform exists in university libraries, how much is being added each academic year, and whether the trend is a rising one and what facilities exist for reading and copying from microforms.

Although one obvious gain in using microforms in place of bound volumes is space saving, the usual motive of the librarian when acquiring material in this form. Often microfilm provides the only possible means of acquiring library stock such as copies of rare out-of-print books, valuable early printed texts (in this way the treasures of our



Microfilm reading area, Skinner's Library, City University.

great libraries are also made available to foreign scholars in their own university libraries), archives and specific subject collections. So that microforms are used to extend acquisition in a way not otherwise possible.

Other motives the librarian has in purchasing microforms relate to inconvenient sized original formats printed on impermanent paper, a newspaper, or elusive, difficult to organise source material such as ephemeral pamphlets on social topics, and the desire to have at hand a file of a learned journal available complete at reasonable price only in microform. A library's own microfilming activities are likely to include microfilming of theses at the time of a request for purchase of a copy or on receipt of an overseas loan request.

The 1970s have seen a surge forward in micropublishing projects in this country. Increasingly they will appear in libraries because the economics of "traditional" publishing clearly indicate that microform must become the only possible way of getting them published. *Books in English*, a standard book selection for libraries, as well as the current bibliography of English language publications, is produced on photochromic/micro image ultra-fiche bimonthly, culminating in six or seven fiche listing the annual output of some 300,000 books (in this way the treasures of our

is the Middle East Datafile, an information service based on the input to the Centre for Middle Eastern and Islamic Studies at the University of Durham. Limited sales possibilities mean a comparatively high price, but publication by any other means would be prohibitively expensive.

Microform use in libraries is still in need of promotion. It is incumbent upon librarians to become much more vocal on standardization, both as to the microforms themselves, and as to reading machines. Individual micropublishers in default of such expression from their consumers will go on promoting the type of microformat which gives them the best return currently.

It may well be that there is a preponderance of material available on 35mm film just because pioneers in the industry have remained best geared to turn this out. It is a matter for daily observation that film is commonly put into reading machines at first attempt upside down and back to front even by library staff. Microfiche is certainly much easier to handle efficiently and quickly. Thus we can only welcome the impetus that American governmental bodies such as the Clearinghouse for Federal, Scientific and Technical Information, and NASA have given to libraries with their reports on microfiche.

Machines could be improved and standardized along the lines of the Xerox 340. The market, though small, is large enough for this and the microform reading machine would thereby get better and more even lighting, and making easier to maintain in perfect order. The areas of developing microfilm in university libraries include the following:

Monograph Publishing: Microforms are being reissued in this form for the library market.

Inter-Library Loans: The growing cost of inter-lending books and journals points to libraries seeking microforms. The item can be hired more than once. If the original cost of a loan at the library and the real cost nearer £2, acquiring microfiche will prove competitive.

Periodical files of microfiche: Periodical files of microfiche acquired simultaneously with the journal on paper, thus saving binding and storage space costs. In the Scientific and New Society are available in this form.

Microfiche data services: Specialist Collection building.

Periodical file build up for back-on-the-spot service.

New forms of publication: Learned journals as proposed by the Chemical Society.

Library catalogues produced in microfiche format: by computer output.

Microfilm systems: as well as the libraries of the University of London and the City of London Polytechnic, among others.

Microforms are therefore a vital addition to the stock of a university library, supplementing provisions and although book lovers need not fear that books will be replaced, microform provides a library with continuous to go.

The author is librarian of the Skinner's Library of City University, honorary editor of *Microfilm Journal*.



Bad readers tend to glare a lot

Patricia Santinelli

Do the controls come readily to hand? Are they labelled? Is the reader easy to load? Is it easy to change a frame? Is the user comfortable looking at the screen and is the image easily legible without straining or getting too close?

These are some of the questions which the late W. J. Barrett, principal investigator for The National Reprographic Centre for documentation, recommended future users to ask themselves before purchasing microfilm reading equipment.

Discovered, I myself recently in the evaluation of "readers". This may sound rather frivolous to the ears of experts used to evaluating readers by breaking them down into 37 categories, but in my view readers undergo the real consumer test when they are seen through short-sighted bespectacled eyes. Glare, for example, on spectacles can cause extreme irritation.

Another feature which is particularly critical for wearers of bifocal spectacles is the screen height and angle. If the screen is too high relative to the user's eyes, he will be forced to hold his head at an awkward angle in order to read the image.

I was particularly enthusiastic about the Xerox 340 microfiche reader which is new to the British market and is sold in America as the Washington Scientific Mini-Cat model MC114. The basic configuration of the Xerox 340 comprises a screen angle at 65 degrees from the vertical on to which the image is projected via a mirror located in the top of the unit.

In the last three years there has been a notable renaissance of such front projector readers. These have tended to be confined to library use because early generation front projectors, although providing a screen image superior in some ways to rear projectors, tended to be somewhat impractical for general use.

However, modern projector lamps of the point light source type allied to the use of new screen materials (the Xerox 340 uses an aluminium screen) have substantially changed the situation. Other recently introduced front projector readers include the Kodak EktaLite 200 and the Bell and Howell Micro Design 950.

Clear instructions on film feed, good focusing control, stability of the reader, low noise level and limited image distortion as well as adequate cleaning instructions are also desirable features which should be checked for.

However in these days of economic belt tightening, most future purchasers really consider the cost first, and in the lower price scale on the market can be found the portable readers. Some like the Kodak EktaLite 120 and 140, which have magnifications of X20 and X40, weigh less than 5lb and cost between £50 to £60.

Other essential points are easy access for lamp change; insuring electrical safety to avoid electric shocks or fire. Also the machine's temperature should not be so high that it can harm the film. The latter particularly applies to vesicular film.

Instructions should be clear, especially if the reader is in a public place, such as a library. They should be printed on the reader itself giving a guide on how to insert microfiche.

Clear instructions on film feed, good focusing control, stability of the reader, low noise level and limited image distortion as well as adequate cleaning instructions are also desirable features which should be checked for.



The Fuji microfiche reader RFP 2.

However, the main considerations to be taken into account when choosing a reader is whether the system to be installed will use microfiche or jackets, roll film in open reels or in cassettes or cartridges. It is also necessary to know what the reduction ratio is, because it is no good buying a reader capable of 10X reduction if the film is exposed at 48X.

Nor is there much choice between the kind of cassettes and readers used. Once a particular make of film has been selected the reader will have to be bought from that manufacturer. It should also be carefully considered whether a manual or an automatic retrieval machine will be needed. In some cases the high speed of frame retrieval may look an attractive and efficient proposition, but it may not be at all necessary, although certainly more expensive.

Essential features which should be looked for and checked are screen luminance and resolution. It is advisable to examine three or four readers at the same time. It should certainly be remembered that if there is not sufficient light for an image to be read in comfort then the reader is not doing its job well.

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depending on the magnification. But on the whole the level of legibility is not impressive and this applies to the Bell and Howell L45 briefcase reader as well.

Scottish Instruments, on the other hand, offer a slightly bulkier portable, the Lensesman microfiche reader, which was designed primarily for the educational market with a downward projection feature particularly useful in some cases.

But for real portability nothing can beat the Japanese Fuji microfiche reader RFP2 which can be carried about in a shoulder bag containing compartments for microfiche sheets and spare lamps. The Fuji is about the size of a notebook and will blow up a frame on a desk top to 20 x 26cm; all that is needed is a white sheet of paper on which the image can be projected.

A supporting stand which is included will instantly convert the RFP2 into a wall projector, suitable for conferences and seminars. The approximate price is £44.

Some customers, however, may prefer or need somewhat bulkier and sturdier microfiche readers. In this range is the Agfa-Gevaert Conex L23 which also takes up microfilm in jackets and sheer film up to 18 x 24cm. The machine has rear projection and two magnification levels. Because it can use colour-fiche, it is a suitable replacement for slide machines.

NCR Ltd has a model which is particularly suitable for libraries wishing to adopt the RNB "Books in English" bibliography produced in PCMI format. This is the 455-5 ultrafiche/microfiche reader which is cheaper than the PCMI reader normally used for this purpose. The reader has interchangeable lenses from X17 for ultrafiche to X42 for conventional computer output microfilm systems.

In the 16mm microfilm equipment range, Scottish Instruments have the Planer and Comet. Both are specially designed, robust units and the immediate difference between them is the type of cassette used. The Planer, which is particularly widely used for computer produced microfilm library catalogues, uses the VSM type cassette offering maximum film protection but not reloadable by the user. The Comet uses the Gaps type of cassette offering less protection but more flexibility.

then taken to the NCR Computer Bureau and processed into 24X reduction, 6in by 4in microfiche, each carrying 62 images and an index page, with as many copy fiche as are required.

The Institute's bibliography on sets of microfiche is said to be one of the most up-to-date lists of American studies books, and is proving so successful that the two new microfiche sets to other libraries are being ordered throughout the world, offering a month by month issue, plus an annual set. Prior to the microfiche sets the cost of the microfiche in book form would have been necessary to purchase the annual accumulation, costing a minimum £18 without postage and packing.

It is still too early for the institute to make exact comparable statistics, between the paper and microfiche version, but they are confident that the microfiche version is very much cheaper than the paper equivalent would have been.

The author is press officer of NCR Ltd.

MicroEditions

MicroEditions are publications from the University of Chicago Press. Publishing in microfiche is not a substitute for but an important complement to conventional book publishing. Although new uses for microfiche are continually being discovered, scholarly publications generally fall into one of four categories: the first category is that of the original and therefore valuable monograph whose audience is too small to make conventional publishing economically possible; the second category comprises those publications that require the reproduction of visual material especially in colour. Publication in book form of many important works in certain disciplines has long been limited as a result of the high cost of reproducing quality illustrations. Microfiche eliminates this problem and introduces several advantages, particularly in regard to accuracy in reproduction; the third category of publication that lends itself to microfiche is the most commonly employed—the reproduction of valuable out of print works, especially important illustrated books that were originally produced in days of lower production costs; the fourth appropriate use of microfiche occurs when the advantages of the book are joined with those unique advantages of microfiche in a new publication form. A highly illustrated work with a book-length text can now be published at a great reduction in cost by printing the text in conventional book form and the illustrations in microfiche.

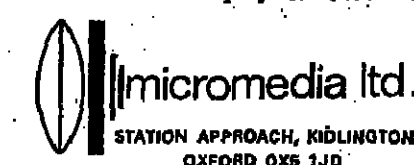
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* Taken from "Microdoc", Vol. 14, No. 8, 1975; typical of comments on projects handled by



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For further information write to:

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22,000 into one will go

Norma Robertson

The Institute at United States Pacific, part of London University, began producing their bibliography of American Studies books on computer output microfiche at the beginning of this year. Despite many teaching troubles they have already produced a complete bibliography for 1974 consisting of 22,000 books, and are up to date on the monthly 1975 issues.

The Institute follow a tight schedule to produce the monthly microfiche. They receive the MARC (Machine-readable cata-

loguing) magnetic tapes per week, one from the British Library containing the current cataloguing of books published in Britain in English and the other from the Library of Congress in Washington containing the current cataloguing of books published in English throughout the world.

The MARC tapes are fed into the computer at University College and processed on to two paper print-outs. Obviously the vast majority of titles contained are not relevant to the Institute and the computer has been programmed to pass over certain sections of the tapes.

It is the weekly task of the two librarians to edit the print-outs, selecting the books they require for the bibliography. Each book is coded, and once the print-out is completed, the observation has been completed, the observation codes are fed into the computer which automatically deletes them from the tapes.

The tapes are accumulated monthly and the entries are sorted into four sequences: the author; title; Dewey classification; and alphabetical subject. The monthly tape is

then taken to the NCR Computer Bureau and processed into 24X reduction, 6in by 4in microfiche, each carrying 62 images and an index page, with as many copy fiche as are required.

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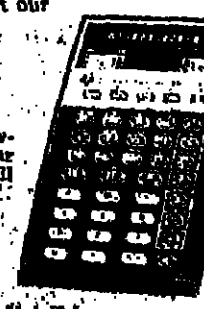
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Invites Nominations and Applications
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The University of Manitoba is a publicly supported institution established in 1877. The full-time enrolment in 22 faculties and schools during the 1974-75 Winter Session was approximately 14,000. In addition to the main campus of the University, the faculties of medicine and dentistry are located at the Health Sciences Campus.

The criteria to be used in reviewing applications and nominations are: satisfactory academic background; ability to effectively and openly communicate with the various publics of the University; a record of administrative competence; strong leadership qualities.

Written applications or nominations will be received in confidence until December 15, 1975, and should be accompanied by a resume of qualifications and addressed to: *Chairman, Advisory Committee for the Selection of a President, The University of Manitoba, Winnipeg, Manitoba, Canada R3T 2N2.*

Applications are invited for two posts of

"WISSENSCHAFTLICHER RAT UND PROFESSOR"

which it is anticipated will become vacant in the ENGLISH DEPARTMENT, UNIVERSITY OF TUBINGEN, GERMANY, as of April 1st, 1976. The posts are of the rank of Professor (H2) (range: H2 to H3, DM 3,300-4,400, H3 DM 3,350-4,500 gross per month, depending on age, marital status, and qualifications). Candidates must have a Ph.D. in English literature and/or linguistics, and a proven record of publications and knowledge of German. Detailed considerations of theoretical and applied linguistics and/or historical linguistics (history of the English language). Applications (including curriculum vitae and list of publications) should be received by December 31st, 1975, to the DEKANAT DER FACHBEREICHE PHILOLOGIE, UNIVERSITÄT TUBINGEN, D-74 TUBINGEN, WILHELMSTR. 56.

Applications are invited for the post of

WISSENSCHAFTLICHER ASSISTANT (A13)

in the English Seminar of the University of Tübingen, attached to the Lehrstuhl Linguistik I (Prof. Dr. A. Rehder). This post is now vacant, and the successful candidate is expected to take up his post immediately, or as soon thereafter as possible. Salary ca. DM 2,600-3,200 per month.

Requirements: Higher Degree in English Linguistics. Knowledge of German essential. Applications, with curriculum vitae and copies of publications, should be sent to arrive not later than 22nd November, 1975, addressed to: *An den Direktor des Seminars für Englische Philologie der Universität Tübingen, D-74 Tübingen, West Germany.*

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Applications are invited from both men and women and should be sent to the Senior Tutor of Brasenose with details of career and publications and the names of three referees not later than 15th November, 1975. Further particulars may be obtained from the College Secretary.

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Please write, briefly stating qualifications and length of appropriate experience; quoting reference number for further details and an application form to The British Council (Appointments), 65 Davies Street, London, W1Y 2AA.

UNIVERSITY COLLEGE DUBLIN

Applications are invited by the Governing Body of the College for the following full-time statutory post:

LECTURESHIP

(equivalent to the grade of Senior Lecturer)
IN FRENCH AND
ROMANCE PHILOLOGY

Preference will be given to candidates qualified to teach Linguistics as applied to French Language and Literature Studies.

Further information and details of application procedure may be obtained from: Mr. J. P. MacFale, Secretary and Bursar, University College, Belfield, Dublin 4. Telephone: 693244, Ext. 431.

Latest date for receipt of completed applications is Friday, 5th December, 1975.

The British Council

King Faisal University, Dammam, Saudi Arabia

COURSE TEAM FOR A PROGRAMME OF COMMUNICATION SKILLS IN ENGLISH

For first year students in the Faculties of Agriculture, Architecture (from 1976-77) and Medicine (1978-77). Applications are invited for the following posts:

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| Post 1 Deputy Director | required for January 1976 |
| 3 Specialist in Science Education | January 1976 |
| 3 Specialist in Multi-Media Systems | August 1976 |
| 8 Course Tutor and Materials Designer (Architecture) | January 1976 |
| 8 Course Tutor and Materials Designer (Medicine) | January 1976 |
| 12 Course Tutor and Materials Designer (Medicine) | August 1976 |
| 12 Assistant Project Engineer | August 1976 |

CANDIDATES: Men only except Posts 9 or 10 which will require a woman tutor response for women students. Suitably qualified and experienced graduates required except post 12 for which experienced non-graduates may apply.

SALARIES: Post 2 £6,244-£8,804 p.a.
Posts 3, 4 £5,335-£8,064 p.a.
Posts 9, 10 and 12 £4,969-£5,524 p.a.

BENEFITS: Allowances £750-£1,500 according to marital status. Free furnished accommodation; travel costs; outfit and baggage allowances; passage-paid annual home leave. Contracts, 18 months for January appointments, 1 year for August appointments, possibly renewable.

Further particulars and forms of application obtainable from Overseas Educational Appointments Department, The British Council, 65 Davies Street, London W1Y 2AA. Please quote reference 76 AU 107-116.

SOCIAL SCIENTIST

£4,495-£6,188

The Council is a Government funded organisation operating under Royal Charter. It promotes and carries out research in the Social Sciences.

A Senior Scientific Officer is required to work as Assistant to the Secretary of the Research Grants Board which is responsible for the operation of the SSRC Research Grants scheme. The work will involve preparation of factual material, drafting papers, co-ordinating inputs on research grant matters to the consideration of the Board, attending meetings to give administrative support to the Secretary and monitoring the trend in expenditure of Council resources on research grants.

Applicants, who should be at least 25 years, should have a good honours degree in one of the Social Sciences, and experience in administration would be an advantage.

The salary scale is £4,595-£6,188 (including London Weighting). Starting salary may be above the minimum depending on experience and qualifications. The hours of duty are 38 per week excluding lunch hours and the leave entitlement is 22 days holiday plus 9 days public and privilege holidays. The Council has its own non-contributory pension scheme.

Please write for application form and job description to Mrs. V. Blight (Ref. THE/1) SSRC, 1 Temple Avenue, EC4Y 0BD. Closing date 14th November, 1975.

Social Science Research Council

JESUS COLLEGE, OXFORD

ST. ANNE'S COLLEGE, OXFORD

Tutorial Fellowship in Law

Lectureship in Law

The Colleges propose to elect an Official Fellow and Tutor in Law at Jesus College, combined with a Lectureship in Law at St. Anne's College, with effect from October 1, 1976. The salary will be on the scale £3,487 to £7,900 per annum (under revision). Further information may be obtained from the Vice-Principal, Jesus College, Oxford, who should receive applications by November 24, 1975.

Universities continued

Social Scientist

£4,595-£6,188

The Council is a Government funded organisation operating under Royal Charter which promotes, supports and carries out research in the Social Sciences. A Senior Scientific Officer is required for work within the Research Initiatives Division of the Council. The post is for the Secretary of the DRS/SSRC Joint Working Party on Transmitted Deprivation. The work will involve preparation for meetings and visits, contact with researchers in the field, and the organisation of seminars and conferences. In addition there will be the opportunity to take part in developing and organising the promotion of new research initiatives in other fields. Applicants should normally be at least 25 years and have a good honours degree in one of the Social Sciences. Experience of research, social work or administration would be an advantage.

The salary scale is £4,595-£6,188 (including London Weighting). Starting salary may be above the minimum depending on experience and qualifications. The hours of duty are 38 per week excluding lunch hours and the leave entitlement is 22 days holiday plus 9 days public and privilege holidays. The Council has its own non-contributory pension scheme.

Please write for application form and job description to Mrs. M. Smith (Ref. ES/2), SSRC, 1 Temple Avenue, London EC4Y 0BD. Closing date 14th November, 1975.

Social Science Research Council

AUSTRALIA

THE UNIVERSITY

Adelaide

Applications are invited for the following appointments:

1. DEPUTY DEAN OF STUDIES

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Polytechnics continued

DEPARTMENT OF BUSINESS AND PROFESSIONAL STUDIES

Lecturer Grade II/Senior Lecturer in Accountancy and Finance

A qualified Accountant is required to teach on degree and professional courses. Salary: £3,278 p.a. to £5,955 (Bar) to £8,417 p.a. (Initially the commencing salary will be within the Lecturer Grade II range with a maximum of £5,493 p.a.). For further details and form of application please send self-addressed telescopic envelope to the Chief Administrative Officer, Trent Polytechnic, Burton Street, Nottingham NG1 4BU. Closing date 10th November, 1975. (Incorporating Nottingham College of Education)

TRENT
POLYTECHNIC
NOTTINGHAM

LONDON

THAMES POLYTECHNIC

SCHOOL OF SURVEYING

PRINCIPAL LECTURER

West Midlands Arts
West Midlands Arts offer a one-year

Fellowship

In Fine Art/Creative Photography to be based in the Fine Art Department of the Polytechnic, Wolverhampton. The Fellow will be expected to make some contribution to the local community as well as developing his/her own photographic ideas. To start 1st February, 1976. Application forms from the Visual Arts Office, West Midlands Arts, Lloyd's Bank Chambers, Market Street, Stafford ST6 2AP. Tel: (0785) 2785/2022, to be returned by 8th December, 1975.

BRISTOL

BRISTOL POLYTECHNIC

LECTURER IN HUMANITIES

Applications for the above post from SURVEYORS in the field of human geography, history, sociology, anthropology, etc. who will take an interest in the development of the school and who will be able to contribute to the local community as well as developing his/her own photographic ideas. To start 1st February, 1976. Application forms from the Visual Arts Office, West Midlands Arts, Lloyd's Bank Chambers, Market Street, Stafford ST6 2AP. Tel: (0785) 2785/2022, to be returned by 8th December, 1975.

PRESTON

PRESTON POLYTECHNIC

LECTURER IN COMPUTER STUDIES

Applications for the above post from SURVEYORS in the field of computer studies, who will take an interest in the development of the school and who will be able to contribute to the local community as well as developing his/her own photographic ideas. To start 1st February, 1976. Application forms from the Visual Arts Office, West Midlands Arts, Lloyd's Bank Chambers, Market Street, Stafford ST6 2AP. Tel: (0785) 2785/2022, to be returned by 8th December, 1975.

WOLVERHAMPTON

WOLVERHAMPTON POLYTECHNIC

LECTURER IN HUMANITIES

Applications for the above post from SURVEYORS in the field of human geography, history, sociology, anthropology, etc. who will take an interest in the development of the school and who will be able to contribute to the local community as well as developing his/her own photographic ideas. To start 1st February, 1976. Application forms from the Visual Arts Office, West Midlands Arts, Lloyd's Bank Chambers, Market Street, Stafford ST6 2AP. Tel: (0785) 2785/2022, to be returned by 8th December, 1975.

SHEFFIELD

SHEFFIELD POLYTECHNIC

DEPARTMENT OF HEALTH

RECORDING NURSE TEACHER

(Lecturer Grade II)

Applications for the above post from SURVEYORS in the field of nursing, who will take an interest in the development of the school and who will be able to contribute to the local community as well as developing his/her own photographic ideas. To start 1st February, 1976. Application forms from the Visual Arts Office, West Midlands Arts, Lloyd's Bank Chambers, Market Street, Stafford ST6 2AP. Tel: (0785) 2785/2022, to be returned by 8th December, 1975.

Administration

BRITISH LIFE ASSURANCE TRUST

FOR HEALTH EDUCATION

Applications are invited for the post of

DIRECTOR

B.L.A.T. CENTRE FOR HEALTH AND MEDICAL EDUCATION

(formerly the BMA Dept. of Audio-Visual Communication)

The successful applicant will have extensive experience in higher, preferably medical, education, and will demonstrate an active interest in educational innovation. Administrative ability is also essential. Salary negotiable, based upon University Reader/Senior Lecturer scales.

Further details may be obtained from Dr. Alan Gilmore, with whom applications should be lodged by 21st November, 1975, together with curriculum vitae and the names and addresses of three referees, at the address below.

BRITISH MEDICAL ASSOCIATION

BMA House, Tavistock Square, London WC1H 9JP

01-387 4489, Extension 14

Fellowships and Studentships

RHODES UNIVERSITY

Grahamstown South Africa

RESEARCH FELLOWSHIP

Institute of Social and Economic Research

A research fellowship is offered for the academic year 1976-77, or the calendar year 1977, at the option of the successful candidate.

The fellow will be required to engage upon full-time research relating to Southern Africa in one of the following fields: History, Economics, Sociology, Politics, Social Anthropology, Linguistics, Geography, Education. The emoluments of the fellowship are at the rate of R6,000 per annum.

Application forms and further particulars may be obtained from the Registrar, Rhodes University, P.O. Box 94, Grahamstown, 6140, South Africa, to whom completed applications should be submitted by 31st January, 1976.

OXFORD

ORAL COLLOQUIUM

IN CLASSICAL LITERATURE

The College proposes to hold an oral colloquium in classical literature in the autumn of 1976. The successful candidate will be required to give a paper on a topic related to the colloquium.

Further details may be obtained from the Registrar, Oral Colloquium, Rhodes University, P.O. Box 94, Grahamstown, 6140, South Africa, to whom completed applications should be submitted by 31st January, 1976.

Administration

OXFORD

THE UNIVERSITY

APPOINTMENT OF A DEPUTY CHIEF ACCOUNTANT

Applications are invited from qualified Accountants or Chartered Secretaries for the post of Deputy Chief Accountant in the University of Oxford, which is a position of great responsibility in the financial affairs of the University. The successful candidate will be required to manage the University's financial affairs and to act as a member of the University's senior management.

Further details may be obtained from the Registrar, Oral Colloquium, Rhodes University, P.O. Box 94, Grahamstown, 6140, South Africa, to whom completed applications should be submitted by 31st January, 1976.

THE LEVERHULME TRUST

Research Awards 1976

The Leverhulme Trustees, through their Research Awards Advisory Committee, offer—

(I) FELLOWSHIPS AND GRANTS

To assist senior persons pursuing investigations, particularly those who are engaged in research in the field of the history, literature, language, or culture of the British Isles, the Leverhulme Trustees offer a number of research awards. These awards are available for persons reading for higher degrees or equivalent study. No subject of inquiry is excluded from consideration.

The awards are limited to persons educated in the United Kingdom or in any other part of the Commonwealth who are now resident in the United Kingdom. The duration of the award is not more than two years or less than three months.

The closing date for applications (Form F/28) is 1st December, 1975. The period of award may start from 1st June, 1976.

(II) EMERITUS FELLOWSHIPS

A limited number of awards to assist persons who have made significant contributions to the history, literature, language, or culture of the British Isles, the Leverhulme Trustees offer a number of emeritus fellowships. These awards are available for persons who have made significant contributions to the history, literature, language, or culture of the British Isles.

The closing date for applications (Form F/28) is 1st December, 1975. The period of award may start from 1st June, 1976.

(III) FACULTY FELLOWSHIPS IN EUROPEAN STUDIES

A limited number of awards to strengthen the teaching of European Studies in the universities of this country, the Leverhulme Trustees offer a number of faculty fellowships. These awards are available for persons who are engaged in the teaching of European Studies in the universities of this country.

The closing date for applications (Form F/28) is 1st December, 1975. The period of award may start from 1st June, 1976.

(IV) SENIOR STUDENTSHIPS

Up to six studentships to enable those who have not yet completed their undergraduate studies to undertake research in the field of the history, literature, language, or culture of the British Isles, the Leverhulme Trustees offer a number of senior studentships. These awards are available for persons who have not yet completed their undergraduate studies.

The closing date for applications (Form F/28) is 1st December, 1975. The period of award may start from 1st June, 1976.

(V) OVERSEAS STUDENTSHIPS

Up to six studentships to enable those who have not yet completed their undergraduate studies to undertake research in the field of the history, literature, language, or culture of the British Isles, the Leverhulme Trustees offer a number of overseas studentships. These awards are available for persons who have not yet completed their undergraduate studies.

The closing date for applications (Form F/28) is 1st December, 1975. The period of award may start from 1st June, 1976.

(VI) EUROPEAN STUDENTSHIPS

Up to six studentships to enable those who have not yet completed their undergraduate studies to undertake research in the field of the history, literature, language, or culture of the British Isles, the Leverhulme Trustees offer a number of European studentships. These awards are available for persons who have not yet completed their undergraduate studies.

The closing date for applications (Form F/28) is 1st December, 1975. The period of award may start from 1st June, 1976.

(VII) EUROPEAN STUDENTSHIPS

Up to six studentships to enable those who have not yet completed their undergraduate studies to undertake research in the field of the history, literature, language, or culture of the British Isles, the Leverhulme Trustees offer a number of European studentships. These awards are available for persons who have not yet completed their undergraduate studies.

The closing date for applications (Form F/28) is 1st December, 1975. The period of award may start from 1st June, 1976.

(VIII) EUROPEAN STUDENTSHIPS

Up to six studentships to enable those who have not yet completed their undergraduate studies to undertake research in the field of the history, literature, language, or culture of the British Isles, the Leverhulme Trustees offer a number of European studentships. These awards are available for persons who have not yet completed their undergraduate studies.

The closing date for applications (Form F/28) is 1st December, 1975. The period of award may start from 1st June, 1976.

(IX) EUROPEAN STUDENTSHIPS

Up to six studentships to enable those who have not yet completed their undergraduate studies to undertake research in the field of the history, literature, language, or culture of the British Isles, the Leverhulme Trustees offer a number of European studentships. These awards are available for persons who have not yet completed their undergraduate studies.

The closing date for applications (Form F/28) is 1st December, 1975. The period of award may start from 1st June, 1976.

(X) EUROPEAN STUDENTSHIPS

Up to six studentships to enable those who have not yet completed their undergraduate studies to undertake research in the field of the history, literature, language, or culture of the British Isles, the Leverhulme Trustees offer a number of European studentships. These awards are available for persons who have not yet completed their undergraduate studies.

The closing date for applications (Form F/28) is 1st December, 1975. The period of award may start from 1st June, 1976.

(XI) EUROPEAN STUDENTSHIPS

Up to six studentships to enable those who have not yet completed their undergraduate studies to undertake research in the field of the history, literature, language, or culture of the British Isles, the Leverhulme Trustees offer a number of European studentships. These awards are available for persons who have not yet completed their undergraduate studies.

Colleges of Further Education

Gwent college of advanced higher education

Gwent Art and Design

Applications are invited for the post of Principal Lecturer in Sculpture, within the Faculty of Art and Design at this newly established College of Higher Education. The person appointed will be responsible for the teaching of sculpture and for the organization of the work of students studying for BA Honours in Fine Art within a sculpture centre of the Faculty.

The closing date for applications (Form F/28) is 1st December, 1975. The period of award may start from 1st June, 1976.

Further details may be obtained from the Registrar, Oral Colloquium, Rhodes University, P.O. Box 94, Grahamstown, 6140, South Africa, to whom completed applications should be submitted by 31st January, 1976.

The closing date for applications (Form F/28) is 1st December, 1975. The period of award may start from 1st June, 1976.

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Overseas

BAC

SENIOR TEACHER

MATHS/PHYSICS

£6,900 to £7,700 TAX-FREE

A senior Mathematics and Physics Teacher is required to take charge of the teaching of these subjects at the King Fahd Al Akhadi at Riyadh in Saudi Arabia, where we are responsible for the training of cadet pilots of the Royal Saudi Air Force.

Applications are invited from graduates with M.Sc. degrees in Mathematics or Physics, at least five years' teaching experience in these subjects, and preferably also post-graduate teaching diplomas. Candidates should be U.K. citizens aged 28 to 50, holding British passports.

The successful candidate will receive free bachelor accommodation and messing, medical care and other facilities. We also offer frequent and generous travel-paid home leave, and contracts are renewable after two years.

Please apply with brief details of appropriate experience, quoting Ref. No. 368/THE, or telephone Preston 634317.

The Personnel Office (S.A.), Saudi Arabian Support Dept., British Aircraft Corporation, Warton Aerodrome, Preston, PR4 1AX, Lancs.

Further details and application forms may be obtained from County Education Officer (FB) County Hall, Dorchester, Dorset DT1 1XJ.

to whom they should be returned by Wednesday, 10th November, 1975.

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AUSTRALIA

Darling Downs Institute of Advanced Education

The Darling Downs Institute of Advanced Education was founded in 1967 by a regional centre of higher education to serve southern inland Queensland, Australia. It is situated in the city of Toowoomba, which is located on the great Darling range 134km west of Brisbane, with a population of 17,000. The city has a rail, road and air connections with Brisbane and is in easy reach of the Gold Coast and Sunshine Coast. It offers a wide range of educational, recreational and medical facilities.

Applications are invited for the following positions which will be vacant in 1976.

School of Arts

The school of Arts currently teaches courses to more than 400 students in all schools of the Institute. It offers three year diploma courses in creative arts and in liberal arts, approved by the Australian Council of Educational Research and Training. The school is divided into four departments: performing arts, visual arts, humanities and behavioural science. The school provides courses in creative arts and humanities to education students, and in liberal arts to students in the technologies and business studies. The school emphasizes the relationship between all areas of study and encourages students to develop their own interests. Staff of the school are expected to teach their own disciplines and to develop common interests with staff and students of all schools.

Department of Performing Arts

Lecturer in Drama

Applicants are sought to undertake teaching to drama students in performing and liberal arts, and in education. A thorough knowledge of history of theatre, and of roles and actions, and the ability to teach drama, are essential. The successful candidate will be expected to provide leadership in teaching and course development and should have some administrative experience. The department is seeking a person with competence in drama on radio or television. It is also seeking a person with a particular competence in music in the primary school. Applicants will require sound academic qualifications.

Senior Lecturer/Lecturer in Music

The music section of the department of performing arts provides teaching in both academic and performing arts, supports a choir and chamber orchestra and promotes music in the school and community generally. Interest is also taken in ethnomusicology. The Senior Lecturer will be expected to provide leadership in teaching and course development and should have some administrative experience. The department is seeking a person with competence in music on radio or television. It is also seeking a person with a particular competence in music in the primary school. Applicants will require sound academic qualifications.

Department of Visual Arts

Lecturer in Printmaking

Applicants are sought for the position of lecturer in printmaking, preferably with some additional experience in photography. The successful candidate will be expected to provide leadership in teaching and course development and should have some administrative experience. The department is seeking a person with competence in printmaking on radio or television. It is also seeking a person with a particular competence in printmaking in the primary school. Applicants will require sound academic qualifications.

Lecturer/Senior Lecturer in Ceramics/Ceramic Sculpture

Applicants are sought for the position of lecturer in ceramic/ceramic sculpture. The applicant will be responsible to the head of the department for the teaching of ceramics and sculpture, and for the supervision of students. The successful candidate will be expected to provide leadership in teaching and course development and should have some administrative experience. The department is seeking a person with competence in ceramics on radio or television. It is also seeking a person with a particular competence in ceramics in the primary school. Applicants will require sound academic qualifications.

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